AN INVESTIGATION INTO THE SCHOLASTIC READINESS

OF PRE-SCHOOL CHILDREN

BY

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CERTIFICATE

This is to certify that the thesis entitled "An Investigation into the Scholastic Readiness of Preschool Children" submitted to the University of Bombay by Ms. V. Murthy for the Degree of Doctor of Philosophy in Education is her own work carried out under my guidance and is worthy of examination.

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ABBREVIATIONS

S.R.	=	Scholastic Readiness.
P.S.C.	=	Pre-school Children.
M.S.	=	Motor Skills.
C.S.	=	Cognitive Skills.
P.S.	=	Psycho-social Skills.
C.E.L.	=	Comprehension of English Language.
A.A.	=	Academic Achievement.
L.S.	=	Language Scores.
G.K.	=	General Knowledge.
N.W.	=	Number Work.
O.A.	=	Other Activities.
1st U.T.	=	1st Unit Test.
1st S.E.	=	1st Semester Exam.
2nd U.T.	=	2nd Unit Test.
2nd S.E.	=	2nd Semester Exam.
S.A.	=	Self Attributes.
P.D.	=	Personal Data.
M.A.	=	Mental Abilities.
P.T.	=	Personality Traits.
S.S.	=	Social Skills.
K.E.	=	Knowledge of English.
E.S.	=	Economic Status.
F.O.	=	Father's Occupation.
M.O.	=	Mother's Occupation.
P.E.	=	Parental Education.
F.E.	=	Father's Education.

M.E.	=	Mother's Education.
N.S.	=	Number of Siblings.
R.A.	=	Residential Area.
P.I.	=	Parental Involvement.
A.C.R.	=	Attitude of Child Rearing.
A.H.	=	Actual Handling.
I.P.R.	=	Inter Personal Relations.
E.P.	=	Expectations of Parents.
F.P.	=	Facilities Provided.
P.C.	=	Preparation of the child.

CHAPTER I

INTRODUCTION

Education has been found to be the most important ingredient responsible for the progress of man. No society or community has ever progressed without education. Hence there is growing concern about imparting education to all, particularly, to young children in the best possible manner. Since, the early years are the most critical years, educationists want to know how best to educate the young children, what are the components of an educational system and, most of all, what are the basic essentials for optimum learning process.

The critical importance of early experiences have been highlighted emphatically by Anutai Vagh in "Parent and Community Participation in the preschool programme".[1] She clearly brings out that a great variety of practices and experiences affect the early development. Grewal[2] too emphasises the importance of early stimulation concluding that the most rapid period for the development of many

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1 Vagh, A. : _Parent and Community Participation in the Preschool Programme_. New Delhi, NCERT 1984. p. 2

2 Grewal, J. S. : _Early Childhood Education_. Agra, National Psychological Corp., 1984. p. 2

characteristics including intelligence is the first five years of life. He stressed the crucial impact of child's early environment. Habits and attitudes learned and adopted during these years remain with the person for a life time.

The need for early childhood education in India, in the context of its national objectives is even more. India as a socialist, democratic, republic, is committed to providing social justice and educational opportunity to all its citizens right from their infancy and early childhood. In the interest of her optimum national development and progress also, the highest possible development of her human resources is imperative. Much of this learning depends on how ready the child is or, made ready. These years comprise the years concerned by early childhood education.

One of the most important factors in any learning situation is the pupils background and previous experience, and the part both have played in developing his readiness to learn. When the child comes to school for the first time, he brings with him certain knowledge and skills that are the result of his experiences and his environment. From such a background, peculiar to each individual the pupil approaches the first learning experience in the classroom. The various ways in which the pupil may meet this new experience depend on his degree of readiness to deal with the experiences at hand.

It has been found that in the present
educational system the curriculum and curriculum methods are
pre-decided. Efforts are made to fit the child into the
system, rather than the system be fitted according to the
requirements of the children. Hence large number of children
are failing 1st grade most often due to insufficient
achievement in learning process. Behaviour problems
blossomed and so did concern about why first graders were
having difficulty in learning.

True, learning problems at any level can
also be due to poor instruction, inappropriate instructional
materials, overcrowded classrooms, inadequate preparation of
teachers, low I.Q., lack of innovation and so on. But the
factor given singular attention is having difficulty for
being not ready when instructions began.[1]

The study of readiness has, until recent
years been the victim of total neglect by both the
researchers and the educationists interested in developmental
processes in children. The entire system of measurement and
screening (testing readiness for admission) has long been
misused and abused. It is one of the many consequences of

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1   Lapp, D., Flood, J. : Teaching Students to Read. New York.
    MacMillan Publishing Co. 1988. p.58.

the general lack of educational planning in India that the impressionable, plastic & educationally potent period of life has received very little attention. Even though the national policy of education 1986 has emphasized the need to strengthen ECCE, it is important to note here that the Central Government is not responsible for pre-school education; consequently, its influence varies from state to state, being mediated through the department of Social Welfare and the corresponding Social Welfare Boards at State level.

The Issue :

The relative neglect by educationists of readiness and its paramount importance on learning is one of the strange paradoxes in the educational system. One wakes up when there are failures or when a child is slow in learning or there are associated problems in learning. The language of problems, difficulties, inadequacies and so on are familiar to all those so closely associated with learning and they want to do something about them. There are devices for correcting, by-passing or overcoming these but what about the normal average child, his capacities, capabilities? What about inculcating, enhancing, motivating and sustaining the prerequisites of learning in him? These remain relatively neglected in studying the emergence of competencies in children for learning.

Again, what about identifying potentially unready pre-school children! This would provide the base for early intervention efforts and compensatory programmes. On the positive side too the early identification of ready children in under privileged settings is of equal importance for their optimum learning.

School makes new adaptive demands on children. As such, an increase in emotional disturbance when the children entered school would not be surprising. The persistent level of more impaired functioning coupled with the decline in academic performance is a matter of grave concern. Emotional health and academic achievement are closely related to each other.

Emotional impairment leads to under achievemnt in the following ways.₁ Learning is a function of, among other things, exposure to environmental stimuli and the child's ability to process information and formulate assumption about the world in which he lives. The shy and inhibited child isolates himself from contacts with the people, events and objects and he is listless and sluggish in

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1 Kohn, M. : Social Competence, Symptoms and Under Achievement in Childhood - A longitudinal perspective. New York, John Wiley 1977, pp. 248-249.

the mode of thinking. The hyperactive and restless child's interactions with his surroundings are too brief and superficial for him to acquire knowledge and develop intellectual skills. He has a short attention span, cannot concentrate and his mental processes are disorganised. Not only are emotionally impaired children handicapped in school achievement but emotionally healthy children enjoyed an advantage over them in mastering academic subjects. Relating the positive ends of the discussions to academic attainment, the child who is inquisitive about the world around him acts frequently with people and objects and has an active mind. The task-induced child has systematic contacts with his environment and thinks in an organised way.

Emotional impairment leads to underachievement or difficulties in learning but the vice-versa is also true viz., the child struggling to cope-up with the tasks expected of him in school could be emotionally disturbed, unhappy tense, anxious, worried and in turn develop a low self-concept. This could considerably block his future progress, since he does not attempt at learning very enthusiastically and sulks. Hence, according to Bloom[1] an educational system to be viable : (a) must provide opportunities for all round growth and learning and furnish environmental

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1 Lilee, D.L. : Early Childhood Education. Chicago.
   Science Research Association Inc. 1975. p. 3.

supports and means to achieve the goals smoothly.

(b) must continuously and certainly be geared to the child's requirements, capacities, potentials and the snags in his environmental climate must be removed. If children should learn to the optimum, they must sustain the curiosity, the inquisitiveness, the eagerness, the urge to know more about things in the world. It becomes imperative that the 'Readiness' aspect be carefully examined, scrutinised and the related aspects studied. It would not be wrong here to say that the present educational system is not conducive to the all round development of the child. One cannot escape the negative impact of the various factors embedded in the system.

With the over emphasis laid on memory, repetition and on the 3 R's, the child's enthusiasm to know more about things in a pleasant manner is ripped away very much early. The child attends school as a routine and a compulsion, with no interest or involvement and, actually, develops averseness to the entire process of learning. This is mainly because of not taking into account the readiness aspect.

The Background of the Study :

A sizeable number of children at S.I.E.S.[1] have been found to be having difficulties in meeting the demands of the school. They had difficulties in paying attention, in concentrating, in comprehending, in socializing, in staying away from their mother and so on as expected at the pre-school stage. The children attending the school belonged to different socio-economic class. There was tremendous discrepancy in their learning capacities due to their readiness level.

There were also children who came from homes which belonged to underprivileged or disadvantaged class. These children not only entered school without much motivation for learning but also lacked the necessary stimulation that is essential at this formative stage.

Inspite of best efforts, equipment and progressive techniques it was felt that the children were not receptive and the teachers sensed a kind of frustration with the lack of progress made. It was opined that proper insight

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1 South Indian Education Society (S.I.E.S.) is a registered body conducting educational services from Nursery to the Management courses since 1930. Nearly 9000 students avail of these educational programmes every year.

into the capabilities of students who were ready for schooling would improve matters. Another opinion evinced was that if, through some kind of screening, the category of children admitted was ascertained, perhaps, problems revolving around their learning could be minimised.

Admissions to schools are conducted nowadays at the nursery lelvel only (where nursery is attached to primary school) after which no formal admission procedure, is followed. Once the child is admitted to the nursery, he gains automatic admission to the primary and, thus, his entire schooling is decided once and for all. Though it may look ridiculous but the young child is subjected to a formal interview with a host of questions which are expected to be answered with precision.

At S.I.E.S. too, admissions are conducted similarly to the pre-primary section at three years, after which the child is not subjected to any interview upto the 10th Std. The school has been following the same procedure for admission, where, the children are asked few questions but it was felt that the procedure was not suitable and needed proper rehauling since it did not cater to the requirement of appropriate screening and did not determine the capabilities of the young child.

To find out what other schools were doing and how they were tackling the issue, the researcher conducted a random survey of 15 schools a list of which is enclosed in Appendix No.1, the findings of the survey are frightening. Almost all the schools followed some kind of admission procedure but none was scientifically based and did not take into account the child's readiness and development. In fact when told that the possibility of devising some suitable method for screening was being attempted many requested that they be furnished with it. Most of the schools asked random questions which tested mainly the conversational skills. It is a known fact that the child at this stage is not proficient in his conversational skills. Even if he is, he is averse to strangers and some brilliant children do not speak when encountered by strangers. Some of them even expected children to recite rhymes, numbers, alphabets and one school even had a written test for admission. Only a few schools allowed the parents to enter with the child, whereas, most of them expected the child to enter alone which was extremely traumatic. Often children were taken away from parents screaming and wailing.

It was also observed that this produced tremendous anxiety symptoms both in parents and children. The tiny-tots were drilled and thrust with lot of information to learn and on the day of interview, were threatened by parents with dire consequences if they do not perform well

and bribed with delicacies so that they would answer and perform well at the interview.

To combat all this and find some suitable solution, the researcher decided to work in the area. True, education is recognised universally as a basic human right which means, it should be accessible to everyone. Logically this implies that there is no room for selection, that no kind of selection procedure be followed anywhere because selection entails rejection. But, if there is adequate provision for education for all or some kind of neighbourhood school concept is accepted, where, every child in the neighbourhood automatically gets admitted to the school, the situation would be different. Added to this are private schools some of which have commercialised education and with the population explosion and lack of number of schools to accommodate all, some kind of selection procedure is being followed. Unfortunately, this selection procedure is not scientific or does not include all the aspects of scholastic readiness. So, in order to systematize the procedure it was decided to embark upon devising scientific and objective ststem/procedure.

Something had to be done so that, the child's readiness and developmental aspects are considered alongwith the requirements of the schools, and young children are not subjected to a kind of exploitation, having to struggle to

meet demands and expectations beyond their capacities.
Again, there are about 10% cases of school failure. It is
also recognised that many children who experience learning
problems also suffer from sensory, physical, social,
emotional or family problems, conditions that appear to
predate school problems and render children more vulnerable
to school failure. Identification of these children, prior
to school entry, can lead to intervention that could reduce
the risk of school failure.

        Also about 2% of the children at S.I.E.S. were
later discovered to be educationally handicapped and hence
should have been identified earlier and referred for
remedial-educational and related, services.

        An enquiry with few of the special schools also
revealed that children were brought to them late and very
rarely at the pre-school stage during which time much could
have been done to change the course of the child's life.

Rationale for the Selection of the Topic :

        Education undoubtedly is a basic requisite for
every child. But many children at S.I.E.S. were found to be
having difficulties in learning. Some were ready to take on
the tasks expected in school and some were not, some came in

with lot of motivation, zeal and enthusiasm to participate in
all the activities and some were docile and aloof.

Imparting education without the knowledge on the
readiness level of the child was found to be meaningless.
Much of the effort to teach was lost because some children
were not receptive or ready to learn. Undoubtedly, knowing
the child's capabilities and potentials to learn is a must
for any teaching-learning to take place. At the same time,
one can't wait for the child to be ready but extend and
expand his existing knowledge, continuously. For this too,
an idea of the state of readiness only will provide exact
clues as to from where to extend his horizon, what areas to
stimulate and so on. Learning takes place only when there is
continuous support and encouragement, constant stimulation
and motivation. It was felt that if this readiness aspect
was researched upon, probably, solution could be arrived at
for teaching children who have difficulties in coping with
school demands. It may also be possible to reorganise the
teaching strategies on the basis of issues revolving around
the readiness aspect. Of particular concern were children
from the underprivileged class who were disadvantaged all the
more in taking-up school tasks. Evidence today indicates
that the children with a home background that is economically
disadvantaged lacks the necessary orientation towards formal
learning. This group has been termed the disadvantaged
group. It is found that language development in such homes

is quantitatively inferior and more limited than in the middle class homes. There seems to exist a lag in vocabulary, sentence length and grammatical structures. Another area is reasoning ability and logical development. The children would be doubly disadvantaged due to their home background and if schools were not to take into consideration this handicap, the disadvantage may then pass from generation to generation.[1]

The readiness aspect, though is genetic, is also environmentally nurtured and a thorough understanding and knowledge of this aspect is of paramount importance, if learning has to be offered meaningfully.

The problem of the disadvantaged is the early drop-out rate and failure, leading to a great deal of wastage and stagnation at the primary level. A study conducted by N.C.E.R.T. in urban municipal schools found that more than 50% of children at the end of class I scored zero in a reading test or in other words, could not read at all.

The only answer is deep knowledge of the readiness aspect. This itself is not the solution to the

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* Thakkar, A. : _Perspectives in Preschool Education_. Bombay. Popular Prakashan, 1980. p. 3.

problem but it will definitely pave the way for devising suitable programmes to meet the particular needs of the group and evolving of learning strategies that will bring about necessary changes in the learning process of child.

Since India consists of a large part of population belonging to the lower-socio economic group, the associated problems of learning is bound to be there in all schools. Definitely, no community can let this large chunk of population drift away. To reduce the high proportion of the disadvantaged children with scholastic problems, it will be necessary to delve deep into the concept of readiness which may enable the academicians to envisage the difficulties that may be encountered due to lack of readiness.

The pre-school age is the most crucial and impressionable age in one's life. More over, the rate of development of the stage is so rapid that the child is able to take in about anything if it is given to him in the form in which he can understand it. [1]

When learning, opportunities match the child's potentials not only do they progress smoothly but it affects

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[1] Muralidharan, R. : A Guide for the Pre-School teachers. New Delhi, N.C.E.R.T., 1978. p. 1.

and influences the child's entire self tremendously. Firstly, the child gets interested in the process of learning and wants to know more and more. Secondly, he develops a positive self-concept about himself and his capacities that he is able to absorb what is given. Thirdly, he starts liking school when the activities and programmes seem tp cater to his requirements and lead him through the ladder of progress.

On the other hand, when learning opportunities do not match the child's potentials, hardly any learning seems to take place; the child is not eager to know anything more and all his enthusiasm wanes. He starts considering himself good for nothing. Anxiety and insecurity mounts up and in the bargain he starts disliking school. Pre-school years being the foundation years it is imperative to see that the foundation of the attitude and approach to learning are laid strong. It is in these critical years that his future is laid, how involved he will be with the entire process and how committed will he be for years to come.

Adults dealing with the disadvantaged and the underprivileged in particular, need to have a thorough knowledge of the child's readiness, since the very areas in which they are unready could become an impediment for any learning. The awareness could enable the personnel to conduct programmes which could compensate the environmental

snags and enrich their experiences to be on par with their peers to take to the tasks expected in school. The environmental stimulation which lacks at home, which, in fact, readies the child in all aspects for the learning process to take place could be compensated and substituted by the school.

If this aspect is not looked into at the pre-school stage itself not only a lot of damage is caused for the child in not enabling him to take to learning smoothly but his very start is shaky, his very foundations are weak. Needless to say any construction on a weak foundation either crumbles down or may not be built very high. As for the child, he either drops out of school very soon or because of his failures does not persue studies for very long.

It was also necessary to study the entire phenomena of testing and screening children for admissions — whether they were meaningful, whether they considered all the aspects that were necessary, whether at all they measured what they were supposed to, whether they had any ill-effects on children and so on.

Characteristics of the Pre-School Stage :

The pre-school stage also called the 'Early

Childhood Stage' is a period between the ages 2 and 6 when the child becomes an entity. The rate of development is most rapid in the early years of life. It is during these years the child learns to deal with his environment and satisfy his basic needs. The nurturing experiences the child receives in the early years of his life serve as the foundation for his/her subsequent learning. These years determine the shape and the patterns of the individual's future development.

In the pre-school period of development, the child gradually changes into a firm supporter of himself or enters the ego-centric phase. Due to this pre-occupation with himself, he is able to establish an understanding of himself, his needs and his relationship to the important people in his environment. The most significant change in the development of the child during this period is the establishment of independence and autonomy. The child wants to do things for himself, and master the intricacies of meeting his own needs.

Besides the chronological span of years from two to six years, another indication that the child is progressing into the pre-school period is the development of the sensory motor intelligence and mastering of the skills of communication and thinking. The pre-school years are marked by increasing interactions with people and objects in his environments. These interactions with the environment help

the pre-school child to grow physically, emotionally and, ofcourse, socially. The sense of autonomy grows into sense of initiativeness and imaginativeness. Much of the learning the child does is through these interactions with the environment.

All the different aspects of development are interrelated. The physical and motor development, the child's achievements in language and communication, the development of social, emotional and intellectual skills, the emergence of a distinct personality are interwoven and contribute to the total growth, of the whole child. During the pre-school years the child's rate of progress in physical growth and his development in social, intellectual and emotional growth shows a positive relationship.

Environmental influences have the greatest effect on the child during periods of rapid development. Therefore appropriate programme during the early years of life will be particularly vital so far as later development is concerned.

Available research evidence indicates that[1]

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1 Muralidharan, R. : Understanding Young Children and their Programmes. Paper presented in the National Conference of I.A.P.E. 1988.

(a)   About 50% of intellectual development takes place
        between conception and 4 years and about 30% between 4
        - 8 years.

(b)   About 50% of the level of vocabulary attained   by 18
        years of age, takes place within the first eight years.

(c)   About 50% of a child's general educational   attainment
        at 18 years, is attained by 9 years of age.

        It has been said many times in educational
literature   that perhaps as much as half of a   child's basic
abilities are developed before he reaches the age of 4.   It
seems to be widely accepted that a child's development   is
most rapid and is most subjected to modification, during   the
first 4 or 5 years of life. Many experts -Evans (1975) Kresh
(1969),   Bruner (1960), White (1959) believe that   the
environment has the maximum impact on the child during   this
period of most rapid growth. It seems clear that   stimulation
plays a very significant role in increasing intelligence.

        Detailed studies of the upbringing of clever
children who later became very clever men and women, seem   to
point   to the fact that they all   received   extensive
stimulation as children. Detailed studies of the   lives   of
very clever children categorically show that they   are
subjected to intensive early educational stimulation.

The brain may be likened to a computer. Into it are fed millions of impressions which are stored and processed. Day by day appraisals, judgements and decisions are made which are processed. It is surely obvious that greater the variety of sensory stimuli to which one is subjected when young (stimuli received through the eyes, the nose, the mouth, the ears and through the tactile and kinesthic senses), greater is the store house of impressions upon which the brain can draw.

Early years are thus crucial years for the development of the child and each child needs an exceptionally rich environment for his optimum development. But, for the majority of India's children this richness of experience........which, every child needs and deserves is beyond reach since most parents are illiterate, poor and too busy trying to make both ends meet.

However, this richness is not merely the richness reflected by expensive clothes, rich food or a beautiful house but it is richness of experience in terms of parent-child interaction and parental aspiration. A home in which the adults find time to play with children, to narrate stories to them, to sing with them, is, perhaps, a rich home for the young child. A home which trusts the child, believes in his/her capacity & has high hopes for him/her is the best stimulator for the child. It is, therefore, important that

all parents, no matter how poor or illiterate they are, should be given the confidence in themselves to play the role of educators for their children, right from the infancy stage.

Significance of pre-school education :

'Pre-school education' also referred to as 'Early childhood education' has assumed great significance in educational development, particularly in the context of the massive effort that is being made to institutionalize elementary education. It has been demonstrated that pre-school education helps in the smooth transition of the child from the informal atmosphere of the home to the formal atmosphere of school. It also strengthens motivation for schooling and promotes what is generally termed as "School Readiness". The fast changing sociological conditions have also necessitated that adequate provision be made for pre-school education.

The tremendous wastage and stagnation that are seen in classes I and II in India can be reduced considerably and even avoided, if the children who join the pre-school classes are prepared in advance for formal schooling.[1]

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A child who goes to a pre-school before joining the primary school adjusts himself much better and fares well in primary classes, because of his early preparation. He has had group experience, he has gained better emotional control, he has developed proper habits and attitudes and he has been encouraged to investigate explore and draws his own conclusions. Such preparation in the nursery school helps him considerably in his subsequent education.[1]

Pre-school education aims at the all-round development of the child - physical, social, emotional and intellectual. It helps the child to develop good health habits, proper attitudes and desirable social skills. It leads to better adjustment to groups and increased emotional maturity on the part of the child. it develops in the child a questioning mind and scientific outlook. In other words it stimulates the total development of the child.

The pre-school years are the most critical and vulnerable period of the child's life and the pre-school atmosphere provides a healthy environment and stimulating experiences during this peiod for his overall development. The pre-school education lays the foundation for the child's

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1 Kohn, R. : The exploring child. Bombay. Orient Longman Ltd., 1984. p. 16.

overall development, through guided experiences and
interaction with a group of children of comparable age and
stage of behaviour.[1]

Educators and psychologists are agreed that more
learning takes place during the first 5 years than at any
other period in life. It is during these formative years
that children are entitled to an opportunity to grow and
develop under the most favourable conditions.[2]

In India, unfortunately, pre-school education is
yet to become an integral part of the Indian education system
and is usually regarded as a welfare activity. Children
below the age of 6 constitute 17% of the total population of
India and 15 million are being added every year. Considering
the fact that the majority of the Indian children come from
disadvantaged homes, the pre-school programmes need to be all
the more emphasized. The problem of the disadvantaged has
indicated that children from home backgrounds that are
economically and socially at the lowest level lack family
orientation towards learning and are virtually excluded from
success in school.

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1 Savarirayan S. : Child Development. Bombay Sheth
   Publishers. 1991. p. 258.

2 Green, M.M., Woods, L.E. : A Nursery School Handbook for
   Teachers and Parents. Delhi. Universal Book Stall, 1969.
   p. 2.

So far, only the higher and middle class have taken advantage of the pre-school educational facilities for their young ones where as the poorer section of the population is denied of the same. Inspite of various policies proposed by the Government nothing much has been achieved in the realm of pre-primary education. The government's programme for universalisation of education has taken care of the educational needs of children from the age of 6 upwards. But the development of children in the 2 - 5 age group who are on the threshhold of entering the primary school have been neglected.

Apart from the lack of number of Institutions, even the few that are there lack the requisite physical facilities and properly trained staff. The unplanned growth of pre-school educational institutions has already affected the quality. Hence, a lot of emphasis needs to be given to the field of pre-school education.

National Policies on Education :

The Constitution, in Article 45, lays down, as a directive principle that every child upto the age of 14 shall receive free and compulsory education. Articles 39, 46 & 47 respectively lend further support to this Constitutional directive. The founding fathers of the Constitution clearly intended to ensure that every child irrespective of social or

economic status of his/her parents, received care and education from birth upto the age of 14 years. This goal was to have been achieved within a period of 10 years from the commencement of the Constitution (Article 45). But all along, this directive has been interpreted narrowly as applicable only to the education of children from the age of five or six upwards.[1] It is, however, never too late to acknowledge, that since care and education must begin at birth, ECCE is part of what was originally envisaged under the Constitution for the development of all children until they complete the age of fourteen years.

The Education Commission (1964-66), clearly recognised the significance of pre-primary education in child development and of its critical link with enrolment, retention and learning outcome in primary schools. Yet, the National policy on education (NPE) (1968), despite its concern for early fulfilment of the Directive Principle of Article 45 and for reducing the prevailing wastage and stagnation in schools; preferred to ignore the Commission's recommendations on pre-primary education. Years later, presumably as a consequence of the National Policy for children (1974), the Fifth Five Year Plan made a beginning by formulating a comprehensive project in the form of the

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1   Report of the Committee for review of National Policy on Education 1986. Final Report. New Delhi, 1990. p. 31.

Integrated Child Develipment Services (ICDS) for the under-
privileged and educationally backward sections of society.

Although ICDS made rapid strides in the late
seventies and early eighties, the government's commitment
towards universalisation of early childhood education
remained ambiguous, as there was still no clear policy
declaration. It is for this reason that the NPE 1986 is a
historic document in that it boldly recognises the importance
of ECCE and lays down the 'holistic' principles on which the
programme is to be developed. The Policy declaration views
ECCE as an essential component in children's development and
as a support service for universalisation of elementary
education and women's development. However, the NPE does not
refer to the constitutional imperative to provide ECCE to all
children.

The scope of the Constitutional directive
(Article 45) of providing, within a specified time-frame,
free and compulsory education for all children until they
complete the age of fourteen, years should be enlarged to
include ECCE. It is important to note here that the central
government is not responsible for pre-school education and
that, consequently, its influence varies from state-to-stae,
being mediated through the Department of Social Welfare and
the corresponding Social Welfare Boards at State level.

Various expert bodies set up by the Government of India from time to time have given their suggestions about the needs of children in the area of health, nutrition and education. But due to constraints on resources and administrative difficulties most of the recommendations do not seem to have been implemented. Many of them remained as pious resolutions.[1]

While examining the above points it appears that the gaps between needs and services in the field of child education will continue to be large until concerted efforts are made by voluntary organisations and government agencies, mutually in order to take effective steps to fulfil the needs of the children.

The National Scene :

There is a tremendous gap between the Need and Provision. It is estimated that children below six years of age number about 14 crores (17% of the population). Of these it may be conservatively estimated that about 5.60 crores (40% of the target age group) fall below the poverty line, whose very survival and development are threatened by neglect

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1   Singha, H.S. :School Education in India - Contemporary
     Issues and Trends. New Delhi, Sterling Publishers .
     1991. pp. 8-11.

and lack of essential child care services.[1] And there are many more, above the poverty line, whose need for ECCE is only a little less acute. Yet, the recent estimates indicate that 1.43 crore children in the 0-6 age group, i.e. only 10% of the target group or one-fourth of the vulnerable segment receive some elements of child-care services.[2] Only some of them may receive an integrated package including health care, nutrition and early childhood education and very few receive day care. Only about 15% of the children in the 3-6 age group receive pre-school education. This is, thus, the extent of the gap between the need and the provision. In fact ECCE should be included in the Minimum Needs' programme. It is time that attention is drawn not only to the importance of early childhood care and education but to some of the practicalities involved in providing it.

As economic pressures mount in developing countries, like India, heart-wrenching decisions have to be made over relative priorities in education. There is a danger that Early Childhood Education may continue to be viewed as something of a luxury. Such thinking is fundamentally wrong. Each time a centre for pre-primary

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1 Report of the Committee for Review of National Policy on Education 1986. Recommendations - Government of India, New Delhi, 1991. p. 114.

2 Aggarwal, J.C. : Ramamurti Report 1990 on National Policy on Education in India. Delhi, Doba House, 1991. p. 49.

education, staffed by sufficiently qualified personnel, begins to operate in a developing country, a veritable nursery for talent is created. "If I were the minister for Education in a developing country, I would not rest until I had beside me a small team truly aware of the significance of pre-primary education"[1].

If any 'real equal opportunity in educational, occupational and social terms are to be laid down, it can only be in the years between birth and five or six years of age'. For a just solution to the problem of inequality of opportunity in a situation where many children do not go to school at all and others drop out prematurely, laying strong foundations through pre-school education is the only answer.

Future Strategies :

First and foremost drastic changes are required for a better future in the field of pre-school education. The term education, should not have a reference to 'schooling' or 'going to school' only. In other words, the strong institutional associations should be removed and education must mean, particularly at the pre-school level

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1   Heron A.: Planning Early Childhood Care and Education in Developing Countries. Paris, 1979 UNESCO: International Institute for Educational Planning. p. 111.

that which takes place at home and in other setting within the community. Only then can one evolve an ideal pre-school system in the real sense with the limited resources available.

Since the pre-school education is linked with universalisation of elementary education, it will have a positive impact on primary school learning environment.[1] Hence, wherever possible, ECCE centres should be linked physically as well as programmatically with the primary school. ECCE will be like a school preparation class which would help in the enrolment, retention, performance at school and development of self confidence in children.

The teacher education and personnel training for E.C.C.E.at all levels is another neglected area. The current training courses available in the country should be reviewed from this perspective and become the starting point for developing a country-wide network of E.C.C.E. training programmes.

In a country like India facing daunting problems of economic and technological development, the case for

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1 Barooch, P.P. : Handbook on Child (With Historical Background). New Delhi. Concept Publishing Co. 1992 p. 253.

working out a local level- with national and regional advice and support - a viable delivery model for integrated or closely co-ordinated E.C.C.E. and family services and support is unanswerable, in terms of scarce resources of both finance and trained personnel. In this regard though the Integrated Child Development Services (I.C.D.S.)Scheme by the Department of Child Welfare of the Ministry of Education and Child Welfare is functioning to provide pre-school education in practice they are not satisfactory.[1]

Another important pitfall that we need to avoid is not to adopt imported models without tailoring them to suit local conditions. That is why the educational activities taking place prior to the age of entry to the primary school system is perceived as mainly a device to accelerate the process of basic education. The result is a distortion of the E.C.C.E. approach to include systematic teaching of reading, writing and number, and the danger of this happening increases with the compulsory or permitted age of entry to primary school in India being at + 5.

The emphasis on the imaginative use of cheap, simple and locally available materials for play and stimulation is very essential. Finally, in the field of

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1 Heron, A. : Op. Cit. pp. 72-74.

learning, a joyous atmosphere is very essential for success. Instead of making learning a dull and drab routine, efforts must be made to make it a pleasant and a pleasurable affair. A positive attitude needs to be cultivated right from the beginning in children.

Concept of Scholastic Readiness

There are certain abilities, attitudes and awareness which underlie and are a pre-requisite to the successful development of learning process in the young child. Educationists are concerned specially with those skills and abilities intended to help the child attain a state of 'learning readiness' when formal instruction can most profitably be undertaken.

Readiness is one of the technical terms that has a direct counterpart in the non-technical language of ordinary conversation. The concept is associated with maturational issues, development and environmental stimulation.

People are ready when the preparation is completed and it is necessary for them to meet expectations for performance. Educators are, ofcourse, concerned with readiness. They want to know when it is best to introduce

various curriculum tasks. It is generally assumed that learning occurs best when people are ready to learn and that without being ready little learning will occur. It also is assumed that a major component of readiness is maturation based on biological growth.

The readiness concept assumes relatively inflexible school requirements for learning in a context of free education for all children. It runs counter to contemporary efforts to provide for individual differences among children and to accept childen with a wide variety of handicapping conditions for instructions tailored to their capacity.

School readiness derives from the well established theory of child development that while development proceeds in an invariant direction the pace of development is highly variable.[1] Well designed test batteries are expected to give trained educators or psychologists a secure basis for determining whether behavioural and chronological age are congruent. Since schools use chronological age as the main basis for entry, many children with uneven profiles are admitted who

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1 Husen. T, Neville, P.T. (Eds) : The International Encyclopedia of Education. Vol VII. New York. Perganon Press 1985. pp. 4217-4219.

experience distress or failure.

   The whole child and not just intellectual functioning is responsible for scholastic readiness. In fact, a socially immature but very bright child was designated as super immature by Gessel, as one likely to experience difficulty in schools. He attempted to define the whole child concept in terms of "adaptive behaviour" or those behaviour which reflect the child's capacity to initiate new experiences and to profit by past experiences which included perceptual orientational manual, verbal skills as well as intellect.[1]

   The child may be ready anywhere between the chronological ages of three and five or even later. First, he must know why people learn and go to school and believe that the reasons are worthwhile. Second he must be shown that people who go to school learn many things that are vital to them and that they have exciting adventures offered. The values of schooling should be made clear not by talking about them but by demonstrating to them. The child who is surrounded by adults who value schooling is likely to enjoy schooling too.

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1 Husen. T, Neville, P.T. (Eds) : Op. Cit pp. 4217-4219.

Components of Scholastic Readiness

General Readiness: Children who have learnt to adjust to group living, to experience success in working with others, to engage in creative experiences, to solve problems, to listen with comprehension, to express themselves with increasing clarity are influenced to develop a desire to read, contribute much to their success in schooling.

General readiness is not confined to pre-school only. It is a concept that applies to every level of schooling. It refers to the factors that determine the probable success of the individual for a particular experience. These factors are frequently classified under four headings - Physical, mental, social and psychological. The factors that are of significance for readiness in schooling at the preschool level are important at every other level of development.

Physical Readiness:- The Physical readiness of the child is dependent upon his physical development his general health and lack of any defects. Such aspects of development as hearing, vision, speech, physical control, muscular co-ordination, effects of childhood disease and present health should be ascertained for meeting the demands of schooling.

Mental Readiness - Mental Readiness is his proficiency in skills such as following directions, interpreting illustrations, seeing likenesses and differences between words, discriminating between word forms, recognising sound elements, forms of objects, numbers and words and comprehending common words and common things. Fluency in oral expression and comprehension also form very important part of mental readiness.

Social Readiness - Social and emotional readiness of the child include his ability to establish contacts with other people, upon his ability to be content, away from his mother and upon his willingness to be part of a group. The child who is just developed but unhappy or ill-adjusted, who is shy and lacking in confidence has difficulty in learning with a group.

Psychological Readiness - Psychological readiness is closely associated with aspects of physical, mental and social development. Many preschoolers are ill-equipped emotionally to meet the demands of schooling. Evidence of withdrawal, hostility, restlessness, lack of concentration, negative reaction to others, negative reaction to new experiences, unwillingness to read, all indicate a lack of readiness. Parental rejection, a broken home, maladjustment to relationships in the home all contribute to feelings of insecurity that may result in a psychological unreadiness for pre-school.

Factors Influencing Scholastic Readiness :

Experiential background -In addition to all this, opportunities provided to the child greatly influence his readiness. Children differ widely in experience. They come from different background. Some have travelled widely whereas some others haven't gone anywhere. Some children have parents who read to them, others never see anything as much as a coloured paper. Although children are interested in play they are also interested in academic achievement and learning. But the expression what we are going to learn is common. Each day is rich with opportunities for learning many things that later give meaning to them. They bring meaning to things they experience. Everything a child sees, smells, hears, feels and tastes, he interprets in time of his own experience and draws upon it to bring meaning to them. The wider the experience he has, the more opportunities to work with others, to talk, to make things, to experiment, to manipulate, to create, to solve problems, the more anxious he will be to add yet another method of extending his knowledge of life.

Aspects Involved in Scholastic Readiness - Scholastic Readiness means readiness of the child for schooling for academic learning and for this the child is expected to be ready in totality - physically, socially, emotionally and ofcourse intellectually too. The ability to leave the mother and be away with the peer, even though for a short duration

is as much important for schooling and learning as the
ability to comprehend and conceptualize - the capacity to
adapt, adjust and interact with the peer group is as much
important as recognition and retention.

Both school readiness and scholastic readiness
are almost synonymous but the researcher has adopted the
scholastic readiness terminology since, it covers a broader
spectrum and includes aspects beyond school readiness.

School readiness includes maturational or
behavioural development equal to the school's entry and/or
promotion requirements. Scholastic readiness includes the
maturation or development not only equal to schools entry and
promotion requirements but the learning process as such which
is expected of him and adaptations at all levels in totality
(scholastic readiness is, thus, defined as the child's
attainment of a degree of physical, intellectual, social and
emotional development sufficient to enable him to fulfill
school requirements and to assimilate the curriculum
content). Readiness is thus viewed as part of a total life
perspective rather than one limited exclusively to schooling.

Research relating to child development has
indicated that children differ widely in their readiness for
learning. The harmony with the thesis that a child should go
to learn, it is vital that an environment is created in which

the invitation of schooling is clearly sensed. This will be possible when the child psychologically matures and develops aspects in every area viz., mental, emotional, social, psychological and general. Nothing is gained by forcing a child to go to school or learn before he evidences readiness. Infact, permanent damage may be done. On the other hand, since the purpose of schooling is to aid learning, every effort must be made to recognise readiness. To lessen the number of unhappy children who need special help, we must recognize children who are not yet ready for schooling so that intervention, enrichment and compensatory programmes can be planned suitably and offered to them.

Finally, if one were to scrutinise closely the operational definitions of scholastic readiness, there emerges a dual character of this definition, which refers to the child himself, on the one hand, and to the school and its requirements, on the other. This is an indication that much attention should be given both to the teaching material and to the methods used. School responsibilities are determined by the educational policy & by the existing curricula. There are gradations in these, while some schools expect the child to recite a few poems, orally learn the alphabets, numbers etc., and develop language and creative skills, some others expect the child to master reading, writing and arithmetic. Needless to say, all these can be expected only if the readiness is looked into and appropriate readiness activities

provided for the same. All the same, whatever the expectations, the child has to engage himself in all this in a group of peers guided by the class teacher in a specially designated place-, ,to which the child must adapt socially, emotionally and physically.

No aspect of development can be discussed without taking into account the home environment and the parental influence. Freud had held that the home and family environment of the child holds the key to the individual's drives and goals, his attitude to life and the world, his general emotional reactions and specific emotional attachments during his adult life. So the home environment and its influence on the scholastic readiness of the child requires to be probed into.

Home Environment and its Relationship to Scholastic Readiness

What is it in the home environment that makes the child scholastically ready or unready? Are there any particular factors features present at home which are responsible for encouraging, enhancing, developing the child's readiness aspects? If identified, can something be done about it?

Several factors are responsible for variations

in the child's performance but home environment appears to have crucial significance. These mainly appear to centre around the parental competence or the degree to which child care practices followed at home provide adequate nurturance and support for growth and development.

Home: Though much used in day to day language, the term 'home' is rarely used scientifically and defined conceptually. It is rather difficult to find an appropriate definition of the same. The subjects of relation between home background and academic achievement have proved very difficult to handle because of the enormous complexity of the concept of 'home'[1]. While there are several important aspects of homelife it is difficult to categorise them into suitable operational terms.

A home cannot be treated as a simple set of variables. It is not explained fully by socio-economic forces alone. Apart from its familiar overtones, it expresses the idea of domestic life and interests.

It was very difficult to spell out the salient

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1 Walberg, H., Marjoribanks, K. : Family Environment & Cognitive Development, Twelve Analytic Models. Review of Educational Research. 1976.45 pp ,527-552.

features of home. According to Hurlock (1987)[1] favourable
home conditions include empathy, communications, respect for
opinions of others, togetherness, independence, a gentle way
of expressing disagreemenmts and compromise. Unfavourable
home climate includes friction, favouritism, feelings of
inadequacy, poor adjustment and lack of emotional warmth.
She further stated that other important factors for an
individual child's development are ordinal position, sex,
size of the family, family roles and family pattern.

The importance of early home experiences and
parental attitudes in shaping the child's personality and
behaviour even as an adult has been recognised since long[2].
The role of the family includes teaching of the child's
attitudes, norms and other attributes of his culture. Family
circle is the most vital social unit in which both childhood
and adult personality are rooted and nourished. Home
environment appears to have crucial significance compared to
all other factors. Behaviour, aspirations, achievements,
aims and values depend on early experiences. Experiences
during the 1st fundamental years of life can have deep and

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1   Hurlock, E.B. : Child Development. Auckland, McGraw-Hill
    Co., 1987. pp. 504-505.

2   Mallya, I. : Parent Involvement to Enhance Child Growth
    & Development in Partnership with School. Paper
    presented in National Conference. I.A.P.E. 1986

lasting effects in the latter adjustments of life[1].

Research studies in psychology and anthropology in the few decades have shown the relationship between parental practices in upbringing of children and the behaviour patterns of adults.[2] According to Wadkar (1970)[3], attitudes of the parents affect the child's development. It is found that the children from autocratic homes were rated by preschool teachers as more likely to fight and quarrel with other children, more inconsiderate to others and more insensitive to praise or blame than those from democratic homes.

Adler has emphasized how over-protection of the child by the parents, predisposes him to neurosis. Harsh parental attitudes were related to such personality problems as shyness, withdrawal and to behavioural problems such as truancy and stealing. Numerous studies have also reported that accepted children engaged themselves predominantly in

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1 Kumar, R. : Child Development in India. Vol I Ashish Publishing House. New Delhi. 1988. p. 181.

2 Kamat, R. : Development of Preschool Children & its Implications for Parents & Teachers. Paper presented in the National Conference of I.A.P.E., 1986.

3 Wadkar, A.J. : Role of Home Background in Academic Achievement. Pune, Dastane Ramachandra & Co., 1989. pp. 8-9.

socially acceptable behaviour while rejected ones manifested a number of unacceptable behaviours. The accepted children are found to be good natured, considerate, cheerful, friendly, co-operative, emotionally stable and interested in work. The rejected children tend to show attention getting behaviour, become problems to school and tend towards delinquency. Inferiority, insecurity and low self-esteem accompany rejection. The rejected child either becomes hostile and aggressive or withdrawn and submissive. Ego strength of the child depends on his home.

The home also sets a pattern for the child's attitude towards people, things and institutions Since the child loves the parents, he identifies himself with them, imitates their behaviour and learns to adjust to life as they do.

It is believed that in most cases, the causes of under achievement may be traced back to the early years of one's life. Early unfavourable home conditions and experiences are found to be responsible for personality difficulties later.[1] These are in turn associated with under achievement. Maladjustment leads to misdirected abilities

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1 Kuppuswamy, B. : Child Behaviour and Development. New Delhi. Vikas Publishing House. 1980. pp260-263

with their adverse effects on academic progress. Emotional blocks accompanied by feelings of inadequacy, inferiority and unsatisfactory human relationship prevent an individual from realising his potential.

Unfavourable conditions like broken homes and other family disruptions are also found in much higher proportion among the parents of under-achievers. Importance of parent child relations is also widely accepted. the physical factors like area of residence, socio-economic status, size and structure of the family and similar other factors indirectly affect parental aspirations, guidance, expectations, and, consequently the child's readiness and learning.........[1].

Development of Readiness: If readiness is so important for learning, a pertinent question that arises is whether Readiness can be promoted, developed, enchanced? If school performance is considered to be closely influenced by the child's readiness it is imperative then that efforts are made to enhance it. Again, in a country where a sizeable number of the population belongs to the disadvantaged class and from where obviously children are going to enter school lacking

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1 McGowan, R.J., & Johnson, A.C. : The Mother-child Relationship & Other Antecedents of Childhood Intelligence - A Causal Analysis Child Development 55,(3). pp. 810-820.

the necessary readiness to take up tasks expected of them, it is but of paramount importance that developing readiness programmes be emphasized.

Earlier, readiness was viewed purely as a product of maturation and the experts felt that introduction of any learning task must match with the child's readiness and one must wait till the child is ready.

Hurlock opined that Effectiveness of learning depends on proper timing".[1] Regardless of how much effort children put into learning, they cannot learn until they are developmentally ready to learn.[2] Importance of Readiness to learn - Regardless of how much stimulation children receive they cannot learn until they are developmentally ready to do so. This means that the necessary physical and mental foundations must be present before new abilities can be built on them[3].

Piaget's work has made it possible for an adult to think on behalf of the child, and to appreciate what

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1 Hurlock, E.B.: Op. Cit. p. 29.

2 Lapp, D., Flood, J. : OP. Cit. pp. 56-57.

3 Devadas, R.P., Jaya, N. : A Text Book on Child Development. Delhi. Macmillan India Ltd. 1987. pp. 6-8.

learning means to the child. The implication of the
Piagetian theories is clear, that learning takes its own
time, that it may be destructive to speed up learning or
development.

The Readiness concept refers to the likelihood
that the individual can make the response in which required.
Readiness is dependent, in turn, on capacity (taken here to
mean the limiting conditions set by the nature of the
learners' physiological system) and on previously learned
behaviour. Limitations due to capacity are considered to
arise through the influence of heredity, maturational level
and physical injury. Thus some behaviours, such as the
solution of calculus problems, are considered to be beyond
the capacity of the sub-human species, the mentally retarded,
young children or persons with certain forms of brain injury.

Limitations on readiness which result from
inadequate prior learnings need to be assessed. The
important question of the basis for the failure to acquire
the pre-requisite responses remains as when we predict that a
student's reading skills are so poor that he is unlikely to
acquire the responses required at the school level, then the
question here is whether the lack of skill is due to lack of
capacity or lack of opportunity to learn the skill.

Significant educational research has recently

shown from the demonstration that many responses acquired during first two or three years of life must be learned and that they require situations which facilitate such learning.[1] Perhaps, educational experiences should be provided at these ages which would greatly facilitate typical school learnings. Though nursery school experience has not been shown to fulfil this function, providing suitable and appropriate programmes could probably fill the lacuna in the Readiness of the child.

Readiness to learn is a process that requires the teacher to develop skills necessary to determine the degree of readiness of a particular pupil for a particular learning activity. One can specify without too much difficulty the skills that are needed in estimating readiness for reading and for a number of other activities.

Readiness is no longer considered a fixed attribute of the child but is relative to our ingenuity in presenting situations, constructing material to stimulate and facilitate understanding. "We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development".[2]

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1 Muralidharan, R. : Development of Pre-school Children in India. Baroda Journal of Nutrition. 9. pp. 336-340.

2 Bruner, J.F. : The Process of Education. Cambridge. Harward University Press. 1966. p. 33.

The impressionable early years constitute the base from which attitudes, habits, values and later, abstract formal learning grow. If this foundation is firmly built upon comprehensive understandings of the young and understandings are reflected in the programmes, methods, and organisational patterns that are devised, it is a sound base for the future.

If substantial changes are to occur, the learning environment cannot be left largely to the child's initiative.

Readiness, thus, may be a maturational aspect but it is the environment that nurtures it and promotes it. Hence, a vicious circle gets established. The more the environmental stimulation and motivation - the more the development of Readiness in the child and his ability to absorb from his environment i.e. learn from the opportunities and experiences provided to him. Certainly, deprivation of learning opportunities can not only retard his readiness , but also not let many of the maturational aspects be seen in the child.

Compensatory/Readiness Programmes

This then brings us to the very significant point i.e. developing appropriate and suitable readiness

programmes to compensate children who lack the necessary environmental stimulation and also devise readiness programmes for the enrichment of readiness.

Hunt[1] for example in the early sixties, came out with a lot of work on "Intelligence and Experience" which, on the basis of both human and animal studies, showed that the development of intelligence was based on the interaction between genetic potential and the quality of environment. This was soon backed by Bloom [2] when he stated that the rate of development, particularly intellectual development, was most rapid in the early years of life or that environmental enrichment or deprivation makes its maximum impact on the organism during the period of its most active growth. Side by side with their studies came the studies of Bernstein[3] on English families. Smilanskil[s] on Israelis[4]. Hess and Shipman's on American Negroes[5] which showed distinct differences in child rearing patterns between

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1 Lilee, D.L. : Op. Cit. p.2.

2 Ibid. p.3.

3 B. Bernstein : Language and Social Class. British Journal of Sociology. 1960. pp. 271-276.

4 S. Smilanski : Evaluation of Early Education in Educational studies and documents. UNESCO, pp. 3-17 1961.

5 Hess, R.D. and Shipman, V. : Early Experience and the Socializationn of Cognitive Modes in Children. Child Development. 36 pp. 887-898, 1965.

the different socio-economic groups. It was seen that children from disadvantaged homes were not quite as well-equipped in cognitive verbal and attentional skills as compared to their relatively well-off counterparts at the point of school entrance and thus they started school with a handicap. All these studies advocated appropriate compensatory education programmes to help these children acquire the necessary skills for learning and adjusting in school. As a result came a large number of intervention studies which may be clubbed under the anti-poverty campaign titled "Head Start".[1] Deutsch's pre-school and Early Elementary Education Project[2], D.P. Weikart, Perry Pre-School Project[3] are some of the outstanding ones. Around the same time in United Kingdom the Plowden Education Commission was appointed. It recommended that facilities for Early Childhood education should be increased considerably and that play centres should be started to help a large number of pre-school children. The U.S.S.R is another country where pre-school education is available to a vast majority of children. The Pre-school teachers in the U.S.S.R. are carefully trained and supervised, the curriculum

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1   S. Gray and R.A.Klaus : Early training project "An Experimental Pre-school Programme for Culturally Deprived Children", Child Development. 36 pp. 887-898, 1965.

2   M. Deutsh : Institute for Developmental Studies : Annual Report. New York Medical College, New York, 1965.

3   Pre-School Intervention: A preliminary Report of the Perry Pre-school Project. Ann Arbor, Campus Publishers 1970,

is spelt out in detail and the best buildings are made available for the pre-schools.

Pre-school years are thus considered crucial in all these different cultures. The foundation for late development is laid at this stage and any damage at this stage is likely to be irrepairable.

Pre-school compensatory programmes grew out of efforts to help low children reverse the cumulative achievement differences that occurred when their achievement was compared with that of middle socio-economic level children. A change towards greater emphasis on achievement and intellectual development was noted among the experimental pre-school compensatory programmes compared with traditional programmes. A variety of specific models of early childhood education was developed, based on different views of child development, including the deliberate use of television as an intervention procedure. Parent education attained a renewed visibility as a means of addressing the problems of low socio-economic level children. The compensatory programmes have identified a variety of ways to adapt educational experiences to help young children improve their performance in school-related bahaviours, particularly, for those coming from economically disadvantaged section of society.

Since the year 1980 in India too concerted

efforts, though negligible, are being made to develop Compensatory and Enrichment programmes at M.S. University of Baroda, Department of Child Development, studies and experiments have been conducted on Home Stimulation, Parent Involvement and so on.

Assessment of Scholastic Readiness:

Investigators in psychology and education have worked for many years to develop methods of assessing children's readiness and abilities. In India, somehow, there are hardly any methods devised except a few attempted at the M.S. University, Baroda. But, these again are on a small scale and not validated on a large sample. Abroad, ofcourse, there are several screening devices for measuring readiness which have been listed in the following chapter. These readiness devices can be administered both before and after children start school.[1]   Most of these try to identify, by means of pre-kindergarten battery, the children who will have later difficulty in learning in school. Some of them are also in use to enable teachers to form homogeneous groups, to identify children whose skills and abilities that need to be

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1 Stevenson, W.H., Parker, Wilkinson, A. : Longitudinal Study of individual differences in Cognitive .Development and Scholastic Achievement — Journal of Educational Psychology 1976, Vol 68. No. 4, 377-400 University of Michigan.

improved through remediation or compensatory education programmes. In general, readiness tests are designed to measure current performance levels in areas important to children's subsequent academic development (i.e. to predict later achievement).[1]

But, what is imperative in these assessment measures is that they must be used mainly for purposes of diagnosis. The ultimate question while administering the devices should be not whether the child is ready or not ready but rather - "In what ways is the child ready and in what ways he is not". It should be only an indicator of the child's readiness.

A Word of Caution.

However, the screening devices need to be used very cautiously in identifying children who need extra help. Because prediction is imperfect, (since there are improvements with age, environmental influence etc.) some children will be mistakenly identified and some who should have been identified will be missed out.

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[1] Oakland : Prediction Validity of Readiness tests. _Journal of Educational Psychology_ Vol. 70, No.4. pp. 74-382. University of Texas and Austin.

Can there be flaws in the very logic of preschool screening? Now, can it be determined whether an young child is going through a stage or showing early signs of a long-term problem? We must be aware of the effects of labelling or categorising children at an early age because parents and teachers may have lower expectations of an unready child, which is confirmed by his or her age, typical problems and eventually result in a self-fulfilling prophecy.

These are the questions that puzzle parents, professionals and policy makers. In theory, early identification and early intervention for school problems appear to constitute a perfectly sound and responsible practice. Resources are devoted to "Ounces of perfection" rather than "Pounds of cure". Children are strengthened instead of weakened, professionals feel rewarded instead of frustrated and parents get assisted instead of blamed. However, this model brings upon certain critical assumptions. The first is that we do not know how much of this early identification will produce significant positive effect in that it will help children who otherwise, may have faced problems. Secondly, not all children showing signs of early difficulties prove to have later problems. Problems may lessen or disappear over time just as they may increase or appear.

At the same time professionals in schools,

clinics and agencies who come in contact with children who are struggling or failing in school often express regret that something should be done for these children sooner. If screening devices are used cautiously and discreetly and educational enrichment experiences (like, motoric or cognitive stimulation, to teach social skills or adaptive behaviour, to foster positive attitudes towards learning, to improve the home environment and parenting skills) provided to those who need, surely it would go a long way in helping every child to be successful in scholastic performance.

The future concern, hence, should be not on screening devices but how to make use of it's results to enhance the development of children.[1]

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Need of the Study:

All children do not enter school at the same level of understanding and with the same capabilities. Though chronologically, they may be at the same age level, there are some who are more advanced in the development, understanding, knowledge and capacities and are much better equipped to meet the expectations, requirements and demands

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1   Stevenson, W. H., Parker, T., Wilkinson, A. : Predicting Achievement.   Journal of Educational Psychology.   1976. Vol 68. No.4 . pp. 377-400.

of schools. There are others who may be just above average and somehow manage to scrape through. But there are a few who may have to struggle so much that they may, ultimately, lag behind and become school failures and dropouts.

There is need to identify such specific needs of children which are not being met in the existing educational system. Since the child's future school success is strongly determinded by his school readiness, a screening device which would help to point out deficits is necessary. It is very essential to provide adequate environment for these children, so that the differences could be levelled and an equal start ensured for all. It is imperative to define criteria for school readiness and find adequate measurement techniques. This will indicate what percentage of children are mature enough to take on school responsibilities. This will aid the school authorities to concentrate ways of reorganising educational functions at the beginning of school instruction so that an equal start is provided for all.

Thus, to combat the problem of children who have initial difficulties in coping with the expectations of the school there is need to work out some strategy. It was felt that these children were not ready for schooling, not prepared for the tasks to be performed for academic learning. It was necessary, then, to investigate into the whole phenomenon. How is it that some children go through

schooling and learning smoothly and swiftly whereas there are others who face innumerable impediments and lag behind in most of the tasks.

It does not imply, however, that if the child is not ready, his entry into school be delayed until he is ready. One nagging implication of the word"readiness" is that if a child is not "ready" his entry into school should be delayed until he is ready. This is a deplorable conclusion, since, it amounts to depriving help to the child who is most in need of help, on the basis of the false assumption that "readiness" depends merely on the passage of time and not on the experiences of the child during that time. If available evidence suggests that a child is not ready for a normal kindergarten, the most direct solution would be to provide special compensatory experiences to help him become ready. Recent data [1] from pre-school research have convincingly demonstrated that high quality pre-school programmes can have a profound effect in helping young children overcome readiness problems. Enrichment and compensatory programmes have shown that appropriate and suitable programmes designed to meet the deficiencies in the environment can help the child develop better. If the development areas that are specific to school learning are considered properly much could be done to promote learning.

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1   Lapp,   D., Flood. J. : Op. Cit   pp. 58.

For this, then, none other than knowledge of the readiness of the child in the area will help.

Ofcourse, there have been conflicting views on whether the 'Readiness ' of the children is maturational or environmental. Bruner and Hunt claim that any learning can be induced if the instructions can be adapted to the child's level. On the other hand maturationists like Gessel, Issacs and Freud including Piaget are of the view to let cognitive ability to develop as it would with maturation.

Piaget's work has made it possible for an adult to think on behalf of the child and to appreciate what learning means to the child. The implication of Piagetian theories is clear, that learning takes its own time, that it may be destructive to speed up learning or developpment.

Readiness though basically based on maturational aspects is also very closelly influenced and promoted by environmental experiences provided to the child. Children start with inborn capacities but the environment in which they grow-up further nurtures their capabilities. Babies need to have a stimulating environment and be motivated to further their perception.[1]

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1 Taraporewala, R., Chugani, N. : A Handbook for Pre-School Teachers. A publication of Indian Association for Pre-School Education (Bombay Branch). pp.1.

Fortunately, it is also true that there is a great deal of resilence in individuals. Though deprivation cause slowing down of development, yet, when normalcy is restored, the child soon makes up for the deficit, provided the deprivation is not continuous and not too severe. By and large, there is enough adaptability in the child by which he/she marks out his/her own strategies to face and overcome the deprivation effectively which means that schools could do a lot to build up the child's readiness. But, more insight into it is definitely required. Majority of children need such efforts on the part of the schools to promote readiness since many come from disadvantaged homes and underprivileged settings. In this context, again, the need for the study was immensely felt to probe into the basics of the Scholastic Readiness of Pre-school Children to ensure the intricacies involved in it.

Either way, the research will be of immense value since, whether Maturation or Environment, the Readiness knowledge would enable devising of such appropriate programmes which would take into consideration the maturational level at which children are and the environmental opportunities that could promote their readiness. Hence, in the context of the present conditions of pre-school education, that of underdeveloped programmes and a sizeable number of disadvantaged children to be catered to, the study would enable to meet problems envisaged at both levels.

Statement of the Problem

"An Investigation into the Scholastic Readiness of Pre-School Children"

The variables of the study are:

1.   Scholastic Readiness

2.   Academic Achievement

3.   Home Background

4.   Personal Abilities

Definitions of the terms

Readiness:

Readiness has been defined as "Physiological condition in which the individual is in a state of preparation to respond".[1] It is a developmental level at which a child has matured sufficiently and had sufficient experience for learning to begin. Developmental factors of importance are mental, age, language, interests, etc.

According to C.V. Good[2] "Readiness is willingness, desire and ability to engage in a given

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1 Page, G.F., Thomas, J.B. : International Dictionary of Education . New York. Nicholas Pub. Co. 1978. p. 284.

2 Good, C.V., Markel, W.R., (Ed): Dictionary of Education. New York, McGraw Hill Book Co. Inc 1973. p. 472.

activity, depending on the learner's level of maturity, previous experience and mental emotional state". The level at which an individual has the capacity to undertake the learning of a specified subject of study or the age at which the average group of individuals have the specified capacity (such as reading readiness) Readiness[1] Ausubel proposed, is 'the adequacy of existing capacity in relation to the demands of a given learning task".

The notion that a person needs to be in a state of preparedness (i.e. not just ready or willing, but also mentally and physically able). The prerequisite abilities may depend not simply on prior learning but also on degree of maturation[2].

Readiness has been defined as a state or condition of the person that makes it possible for him to learn or undertake a given task[3] Readiness depends upon the learners' level of maturity, previous experience and mental

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1 Ausubel, D.P. : Viewpoints from Related Disciplines Human Growth and Development. Teachers College Record LX (February, 1959), pp. 245-254.

2 Rowntree, D. : A Dictionary of Education. London. Harper & Row Publishers. 1981. p. 244.

3 Biswas, A., Aggarwal, J.C. : Encyclopaedic Dictionary & Directory of Education with special reference to India. Vol I. p. 135.

and emotional set. It is a composite of many qualities and conditions and differs from one learning task to another.

Scholastic Readiness (S.R.)

Scholastic Readiness is defined as the child's attainment of a degree of physical, intellectual, social and emotional development sufficient to enable him to fulfill school requirements and to assimilate the curriculum content.

Scholastic Readiness is 'Readiness of the child for the learning process as a whole including the maturational and developmental aspects equal to school's entry and promotional requirements.

Pre-School Child (P.S.C.)

According to Rowntree a preschool child who is not yet old enough to begin attending school.[1]

Pre-school child is a child in the age group of 2-1/2 to 5-1/2 years - at the beginning of which the child is usually admitted to a nursery school. It is also referred to as the 'Early childhood Stage".

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1 Rowntree, D. : Op. Cit p. 225.

Pre-School Education (P.S.E.)

Pre-school education is an 'Early Childhood programme' emphasizing the training, education and total development of the child. It generally connotes education at the prekindergarten level but also refers to any educational experiences provided by a school at the pre-primary and primary levels.[1] A Pre-primary school is a separately arranged and administered elementary school for pupils in the year or years preceeding the 1st grade. This may include pupils in the prekindergarten years or grades. It is a beginning group or class enrolling children younger than five years of age and organised to provide educational experiences under professionally qualified teachers in cooperation with parents during the year or years prior to entry into elementary school.

The method and theory of guiding young children in a group generally refers to education demonstrated in nursery schools. Emphasis is placed on developing capacities of the individual and on helping him to meet his problems.

This general term embraces the different types

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1 Shafritz, J.M., Koeppe, R.P., Saper, E.W. : The Facts on File. Dictionary of Education. N.Y. Facts on File, 1988. p. 362.

of education available for the under-fives and includes nursery schools, nursery classes and pre-school play groups. In India, there is no statutory obligation for local education authorities to provide pre-school education. Hence there is lack of awareness of importance of pre-school education and resulting neglect of the same.

Rowntree defines it as "Any organised education prior to primary education - Education for children to prepare them for school life and learning".[1] The emphasis is on providing a richly stimulating environment and opportunities for social and language development.

Education related to the training and development of children before the beginning of formal schooling comprises of preschool education.[2]

Academic Achievement (A.A.)

Knowledge obtained or skills developed in the school subjects, usually designated by test scores or by marks assigned by teachers or by both,comprises of Academic

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1 Rowntree, D. : Op. Cit. p. 225.

2 Biswas, A., Aggarwal, J.C. : Op. Cit. p. 127.

Achievement.[1]

The scores obtained by the individual child in the academic performance is taken as A.A. The school conducts two Unit Tests (U.T.) one in each term and two exams at the end of the semester (S.E.). A.A. comprises of three sub categories - Language Scores (L.S), Number Work (N.W.) and General knowledge (G.K.). Each of the subcategory carries 100 marks totalling to 300 on the whole.

Home Environment (H.E.)

According to the Chambers Twentieth Century Dictionary, Home is defined as the habitual abode or residence of one's family or the scene of domestic life, with it's emotional associations.

Home has been defined as the place where a person or family lives - one's own home or dwelling place.[2]

Environment is a general term designating all the objects, forces and conditions that affect the

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1 Good, C.V., Markel, W.R., (Ed): Op. Cit. p. 6.

2 Barnhart, C.L., Barnhart, R.K. : The World Book Dictionary. Vol I. Chicago. Doubleday and Co. Inc. 1987. pp. 10-11.

individual through such stimuli as he is able to recieve.[1]
Environment is all of the surroundings, things, conditions
and influences affecting the growth and development of living
things. A child's character is greatly influenced by his home
environment.[2]

According to Biswas & Aggarwal "Environment
comprises of all the objects conditions and factors around an
individual having the power to influence him".[3]

H.E was the environment and/or the conditions in
which the child was growing up. It comprised of two
categories - Home backgrounnd (H.B) and Parental Involvement
(P.I.). Home background was the background of the child's
home which constituted - Parental education, their
occupation, socio-economic status, number of siblings and the
residential area.

The socio-economic conditions of the family,
it's type and the literacy levels and the occupations of the
parents of the child goes to make up the home background.

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1 Good, C.V., Markel, W.R., (Ed): Op. Cit. p. 214.

2 Barnhart, C.L., Barnhart, R.K. : Op. Cit. p.708.

3 Biswas, A., Aggarwal, J.C. : Op. Cit. p. 61.

P.I. was the involvement of the parents in the child's growth and development — what type of interaction and involvement is offered to the child. This P.I. was measured through 6 broad aspects which had 10 sub-aspects in it. The 6 broad aspects were (i) Attitude to Child Rearing, (ii) Actual Handling, (iii) Inter personal relations, (iv) Expectations of Parents, (v) Facilities provided and (vi) Preparation of the Child.

Personal Abilities (P.A.)

Ability has been defined as 'The present power to perform a physical or mental function. An individual's potential to perform.[1]

Ability is the actual power present in an organism to carry to completion any given act or to make adjustments successfully.[2]

Biswas defines ability as " The power present in an organism to perform an act, physical or mental, or to make adjustments successfully. Generally speaking ability is the actual power in a person to perform any work.[3]

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1 Shafritz, J.M., Koeppe, R.P., Saper, E.W. : Op. Cit. p.1.

2 Good, C.V., Markel, W.R., (Ed): Op. Cit. p. 1.

3 Biswas, A., Aggarwal, J.C. : Op. Cit. p. 1.

The child's abilities in 'Other activities' (O.A.) and Self Attributes (S.A.) were included in this.

Other activities which consisted of painting, drawing, creative work, clay and puzzles were taken up to see how far a child is proficient in them. These activities were conducted in the school as co-curricular activities.

The self attributes like Personal Development, Mental Abilities, Social Skills and Personality Traits were graded by the teachers which were maintained in the Teacher Rating Scale.

Aims of the Study:

The aims of this study can be classified into four broad categories.

Firstly, to investigate into the concept of scholastic readiness of Pre-school children - what is it that constitutes S.R., what contributes to S.R. and what are the components of S.R.

Secondly, the aim was to prepare a screening device to measure S.R. and use the tool to compare children with different levels of S.R.

Thirdly, to probe into the Home Background and

Parental Involvement and their relative influence on S.R. and
A.A.

Fourthly, to make suggestions to identify
unreadiness and suggest ways of enhancing scholastic
readiness.

Objectives of the Study:

1. To study and research in the area of S.R.

2. To identify areas and aspects favourable for S.R.

3. To design an appropriate screening device to measure
   S.R. of P.S.C.

4. To find out whether screening aids in identifying
   children who are scholastically not ready.

5. To find out whether screening aids in pinpointing
   specific areas in which the child is scholastically
   unready.

6 To enlist the components of S.R.

7. To indentify factors responsible for S.R.

8. To study the relationship between S.R. and A.A.

9 To study the effect of S.R. on A.A.

10. To find the effect of S.R. on adjustment to school.

11. To compare children with different levels of S.R. on
    A.A.

12. To compare children with different levels of A.A. on
    S.R.

13. To study H.B. and its influence on S.R. of children.

14. To study H.B. and its influence on A.A. of children.

15. To study the effect of P.I. in their children on S.R.

16. To study the effect of P.I. in their children on A.A.

17. To study the effect of P.Int in their children on S.R.

18. To study the effect of P Int in their children on A.A.

19. To find out the differences in A.A. of children with different levels of S.R.

20. To find out the differences in S.R. of boys and girls.

21 To find out the differences in A.A. of boys and girls.

22. To find out the differences in S.R. of P.S.C. from different groups.

23. To suggest enrichment programmes that may help children who are ready.

24. To suggest intervention and compensatory programmes for children who are unready.

Assumptions:

1 Readiness of the child is basic for any learning.

2. Unready child will have difficulty in learning

3. Both Maturational and enmvironmenmtal|aspects influence readiness.

4. Children from under priviliged situation and disadvantaged homes will lack readiness.

5. Readiness can be promoted and enhanced.

6. The earlier one can effect a plausible intervention the better.

7. Pre-school stage is the best period for promoting Readiness.

8. With appropriate programmes, unready child can be brought on par with the ready child.

9. Children are by nature malleable and their growth and development can be modified extensively in a variety of directions with the knowledge of readiness.

10. This manipulation of experiences will influence his total development.

11. The provision of qualitatively sound experience can modify or compensate for basic lacks in the child's environment. Such lacks define the basis on which experiences can be built.

12. Since school's performance is vital to child's life, children who are not ready are causing both personal and national loss.

13. Home background is crucial to readiness of the child.

14. Parental Involvement and interest in child rearing is extremely important for childs readiness.

15. Conducive environment in the form of stimulation and motivation is basic to readiness.

Hypotheses:

A Group of Hypotheses

Hypotheses of Relationship

S.R. - A.A.

B Group of Hypotheses

      Hypotheses of Difference

              A.A. - S.R.

C Group of Hypotheses

      Hypotheses of Difference in

              S.R. - Boys and Girls

              A.A. - Boys and Girls.

D Group of Hypotheses

      Hypotheses of Difference

              S.R. - Age

E Group of Hypotheses

      Hypotheses of Difference

              O.A. - S.R.

F Group of Hypotheses

      Hypotheses of Relationship

              S.R.-T.R.

G Group of Hypotheses

      Hypotheses of Difference

              S.R.-H.B.

H Group of Hypotheses

      Hypotheses of Difference

              S.R. - P.I.

I Group of Hypotheses

      Hypotheses of Difference

              A.A. - P.I.

J Group of Hypotheses

      Hypotheses of Difference

              S.R. - P. Int

              A.A. - P. Int.

A Group of Hypotheses of relationship.

A 1. a) There is no significant relationship between S.R. and A.A. of P.S.C..

b) There is no significant relationship between S.R. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between S.R. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between S.R. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between S.R. and A.A. of P.S.C. at 2nd S.E..

A 2. a) There is no significant relationship between M.S. and A.A. of P.S.C..

b) There is no significant relationship between M.S. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between M.S. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between M.S. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between M.S. and A.A. of P.S.C. at 2nd S.E..

A 3. a) There is no significant relationship between C.S. and A.A. of P.S.C..

b) There is no significant relationship between C.S. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between C.S. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between C.S. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between C.S. and A.A. of P.S.C. at 2nd S.E..

A 4. a) There is no significant relationship between P.S. and A.A. of P.S.C..

b) There is no significant relationship between P.S. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between P.S. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between P.S. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between P.S. and A.A. of P.S.C. at 2nd S.E..

A 5. a) There is no significant relationship between C.E.L. and A.A. of P.S.C..

b) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 2nd S.E..

B. Group of Hypotheses of Difference.

B 1. a) There is no significant difference in the A.A. of P.S.C. with different levels of S.R.

b) There is no significant difference in the A.A. of P.S.C. with different levels of M.S.

c) There is no significant difference in the A.A. of P.S.C. with different levels of C.S.

d) There is no significant difference in the A.A. of P.S.C. with different levels of P.S.

e) There is no significant difference in the A.A. of P.S.C. with different levels of C.E.L..

B 2. a) There is no significant difference in the L.S. of P.S.C. with different levels of S.R.

b) There is no significant difference in the L.S. of
   P.S.C. with different levels of M.S.

c) There is no significant difference in the L.S. of
   P.S.C. with different levels of C.S.

d) There is no significant difference in the L.S. of
   P.S.C. with different levels of P.S.

e) There is no significant difference in the L.S. of
   P.S.C. with different levels of C.E.L..

B 3. a) There is no significant difference in the N.W. of
   P.S.C. with different levels of S.R.

b) There is no significant difference in the N.W. of
   P.S.C. with different levels of M.S.

c) There is no significant difference in the N.W. of
   P.S.C. with different levels of C.S.

d) There is no significant difference in the N.W. of
   P.S.C. with different levels of P.S.

e) There is no significant difference in the N.W. of
   P.S.C. with different levels of C.E.L..

B 4. a) There is no significant difference in the G.K. of
   P.S.C. with different levels of S.R.

b) There is no significant difference in the G.K. of
   P.S.C. with different levels of M.S.

c) There is no significant difference in the G.K. of P.S.C. with different levels of C.S.

d) There is no significant difference in the G.K. of P.S.C. with different levels of P.S.

e) There is no significant difference in the G.K. of P.S.C. with different levels of C.E.L..

C Group of Hypotheses of Difference.

C 1. a) There is no significant difference in the S.R. of boys and girls.

b) There is no significant difference in the M.S. of boys and girls.

c) There is no significant difference in the C.S. of boys and girls.

d) There is no significant difference in the P.S. of boys and girls.

e) There is no significant difference in the C.E.L. of boys and girls.

C 2. a) There is no significant difference in the A.A. of boys and girls.

b) There is no significant difference in the A.A. at 1st U.T. of boys and girls.

c) There is no significant difference in the A.A. at 1st S.E. of boys and girls.

d) There is no significant difference in the A.A. at 2nd U.T. of boys and girls.

e) There is no significant difference in the A.A. at 2nd S.E. of boys and girls.

C 3. a) There is no significant difference in the L.S. of boys and girls.

b) There is no significant difference in the L.S. at 1st U.T. of boys and girls.

c) There is no significant difference in the L.S. at 1st S.E. of boys and girls.

d) There is no significant difference in the L.S. at 2nd U.T. of boys and girls.

e) There is no significant difference in the L.S. at 2nd S.E. of boys and girls.

C 4. a) There is no significant difference in the N.W. of boys and girls.

b) There is no significant difference in the N.W. at 1st U.T. of boys and girls.

c) There is no significant difference in the N.W. at 1st S.E. of boys and girls.

d) There is no significant difference in the N.W. at 2nd U.T. of boys and girls.

e) There is no significant difference in the N.W. at 2nd S.E. of boys and girls.

C 5. a) There is no significant difference in the G.K. of boys and girls.

b) There is no significant difference in the G.K. at 1st U.T. of boys and girls.

c) There is no significant difference in the G.K. at 1st S.E. of boys and girls.

d) There is no significant difference in the G.K. at 2nd U.T. of boys and girls.

e) There is no significant difference in the G.K. at 2nd S.E. of boys and girls.

D Group of Hypotheses of Difference

D 1. a) There is no significant difference in the S.R. of P.S.C. from different age groups.

b) There is no significant difference in the M.S. of P.S.C. from different age groups.

c) There is no significant difference in the C.S. of P.S.C. from different age groups.

d) There is no significant difference in the P.S. of P.S.C. from different age groups.

e) There is no significant difference in the C.E.L. of P.S.C. from different age groups.

E Group of Hypotheses of Difference

E   a) There is no significant difference in the O.A. of P.S.C. with different levels of S.R.

b) There is no significant difference in the O.A. of P.S.C. with different levels of M.S.

c) There is no significant difference in the O.A. of P.S.C. with different levels of C.S.

d) There is no significant difference in the O.A. of P.S.C. with different levels of P.S.

e) There is no significant difference in the O.A. of P.S.C. with different levels of C.E.L..

F Group of Hypotheses of Relationship

1. There is no significant relationship between S.R. of P.S.C. and T.R. on S.A.

2. There is no significant relationship between S.R. of P.S.C. and T.R. on P.D.

3. There is no significant relationship between S.R. of P.S.C. and T.R. on M.A.

4. There is no significant relationship between S.R. of P.S.C. and T.R. on S.S.

5. There is no significant relationship between S.R. of P.S.C. and T.R. on K.E.

G Group of Hypotheses of Difference

1. There is no significant difference in the S.R. of P.S.C. with different levels of P.E.

2. There is no significant difference in the S.R. of P.S.C. with different levels of M.E.

3. There is no significant difference in the S.R. of P.S.C. with different levels of F.E.

4. There is no significant difference in the S.R. of P.S.C. with different levels of M.O.

5. There is no significant difference in the S.R. of P.S.C. with different levels of F.O.

6. There is no significant difference in the S.R. of P.S.C. with different levels of S.E.S.

7. There is no significant difference in the S.R. of P.S.C. with different N.S.

8. There is no significant difference in the S.R. of P.S.C. from different R.A.

H. Group of Hypotheses of difference

1. There is no significant difference in the S.R. of P.S.C. with different levels of P.I.

2. There is no significant difference in the S.R. of P.S.C. with different levels of A.C.R.

3. There is no significant difference in the S.R. of P.S.C. with different levels of A.H.

4. There is no significant difference in the S.R. of P.S.C. with different levels of E.P.

5. There is no significant difference in the S.R. of P.S.C. with different levels of I.P.R.

6. There is no significant difference in the S.R. of P.S.C. with different levels of F.P.

7. There is no significant difference in the S.R. of P.S.C. with different levels of P.C.

I. Group of Hypotheses of Difference

1. There is no significant difference in the A.A. of P.S.C. with different levels of P.I.

2. There is no significant difference in the A.A. of P.S.C. with different levels of A.C.R.

3. There is no siginificant difference in the A.A. of
   P.S.C. with different levels of A.H.

4. There is no significant difference in the A.A. of
   P.S.C. with different levels of E.P.

5. There is no significant difference in the A.A. of
   P.S.C. with different levels of I.P.R.

6. There is no significant difference in the A.A. of
   P.S.C. with different levels of F.P.

7. There is no significant difference in the A.A. of
   P.S.C. with different levels of P.C.

I Group of Hypotheses of difference

1. There is no significant difference in the S.R. of
   children with different levels of P.Int.

2. There is no significant difference in the A.A. of
   children with different levels of P.Int.

Scope of the Study:

The study attempts to investigate into the S.R.
of P.S.C. and to find out what are the aspects involved in it
and to enlist the components that comprise it.

It attempts to probe into the relationship between S.R. and school performance - whether any kind of readiness is a pre-requisite for better school performance, and if so, what are the factors associated with children who possess it or lack it. Simultaneously, it also deals with the possibility of screening the readiness aspect which may ultimately aid schools in designing a suitable curriculum and devise enrichment/compensatory programmes to enhance the readiness aspect.

While probing into the aspects of S.R. and its relationship with A.A. efforts are also made to study the differences that exist between boys and girls and between children of different age groups.

Home environment is another area of inquiry where both the Home Background (H.B.) and the Parental Involvement (P.I.) are explored in detail. These give a complete idea of the influences and factors that are working on the child and how they affect the readiness as such.

The child's 'Personal Abilities' (P.A.) are also scrutinised, comprising of his ability in 'Other Activities' (O.A.) and 'Self Attributes' (S.A.) rated by the teacher in the 'Rating Scale'.

Thus, the scope of the study includes the investigation of the S.R. in relation to the P.S.C. in totality.

Limitations of the Study:

As it is difficult to collect information at the pre-school level, the study suffers from limitations in this sphere. These shortcomings are mainly due to difficulties experienced in screening children. Some of the children were so moody, anxious and apprehensive that it was a herculian task to make them feel comfortable and relaxed.

Getting information at school level too was a problem. Even though all the schools visited agreed to give data on the procedure adopted to screen children, at the first instance, but, despite repeated requests by the researcher some schools evaded giving responses to the type of questions asked and one school even refused flatly to co-operate. Few schools could not give full information due to non-availability of organised methods followed.

The interviews of parents too suffered due to several reasons -the non attendance of parents, apprehension on their part about answering questions truthfully, associating the interview with the promotional procedures of

the child and so on. Lot of coaxing and assurances were required to make the parents relax and discuss objectively and truthfully.

The success of the study depended greatly on the right attitude of parents and schools in giving true information. Most of them initially felt it was testing their type of work and handling and therefore, tended to be apprehensive in discussing the true picture and it required a lot of persuasion and goading to make them discuss.

The Scholastic Readiness Device has taken into consideration all basic features and pre-requisites of learning, whereas achievement scores have concentrated on cognitive functioning only. Since memory and reproduction is very high at this stage, perhaps, parents and teachers have been able to tap these which has contributed to moderate reliability of the tool.

Significance of the Study:

This study is a modest effort by the researcher to open avenues in understanding young children and their education. Any work in the area of 'Scholastic Readiness' is sure to promote a deep understanding of the factors that help the children for readiness.

Since little attention has been paid to the readiness of the child and less so on assessing children appropriately, this study would be useful for teachers, principals, policy makers, administrators, counsellors and even parents. Theoretically, it is useful to educators as well as administrators to have a model which can be fitted in their educational system.

It will help the educators because the findings would enable them to understand the readiness aspect and how relevant it is to the phenomenon of learning and schooling.

From the practical point of view the present study may help the authorities to plan and design programmes for young children, which may in turn enhance the learning process of children.

It will also help the policy makers to design and devise programmes which will aim at compensating the lack of environmental stimulation.

Even a marginal but a sure and definite increase in the achievement motives would be of great help.

Knowledge of readiness would also help the educator to provide rich educational experiences.

The environment cannot be changed but with appropriate programmes, the child's readiness can be enhanced.

The study would help schools to design curriculum and content suitable for the group that they are catering and not expect all children to meet the demands of the same syllabus. It will help reduce the number of children who fill remedial classes and also lessen school failures. In fact, it can give a complete twist to the entire approach to education and to the learning process - not to compel and force children to do certain tasks and label those children who cannot do it.

The study will also help educators in guiding the disadvantaged, and in developing their readiness right from the pre-school stage. This study would aid even parents in providing a stimulating climate at home and thus help children to develop necessary readiness for optimum learning.

The teachers would gain a deep understanding of the aspects involved in 'Scholastic Readiness' and, perhaps, not just cater to the children at their level of understanding, but, in fact, plan programmes for infusing and inculcating the necessary readiness in children who lack it.

Knowledge of readiness would enable the teacher

to be aware of the limiations of the child's level of intelligence.

Enrichment programmes can be worked out, which would enhance the existing level of 'Scholastic Readiness'.

Identification of the ready and unready children would enable the teacher to plan programmes at their level.

It will help the teacher to support, praise and to find tasks for the child that are within the competency and minimising the difficulties that may be encountered.

It will help in avoiding frustration in children, parents and educators.

It goes without saying that success in any task or activity depends to a great extent on the readiness of the person to undertake the task. School success, too, depends largely on the readiness of the child and on his ability to meet demands of school. Strangely, this readiness not only leads to school success, but leads to emotional satisfaction and maturity. Being able to meet demands set by the school he develops a positive self conept and is content with his ability to perform. Hence, this study would be of great significance not only in throwing light on readiness and school success but also in fact, on the total development and well being of the child.

It has been demonstrated beyond doubt that the intellectual faculties appearing between the ages of 2 and 7 open vast possibilities of influencing a child's cognitive processes and his overall intellectual development. If no proper educational influence is exerted in this period, there is little chance of ensuring full development later. Gifted children are most often those who are lucky enough to be brought up in favourable environment that enables them to utilise the optimum learning period. Slow learners, on the other hand, proved to be those brought up in a less favourable environment which contributed to the accumulation of their developmental shortcoming. Maximum development of a child's cognitive abilities as well as compensating for environmental differences, favours not only intellectual but also emotional development, since no failure is then encountered either in kinder-garten or in the primary school.

It, therefore, seems obvious that in order to provide all children with full possibilities of over-all development, the objectives, teaching content, methods, forms and strategies of pre-school education must be changed. This calls for experimental work on pre-school education at various stages of the child's development and full implementation of the most effective measures. In this sense, the study will make significant contribution in providing strategies for the optimum learning and development of children.

This would also help a long way in developing a positive academic self-image. Because, difficult tasks and high expectations due to lack of knowledge on readiness would only develop negative academic self-concept and a general low self-esteem.

Finally, it could create an awareness in authorities of screening children more effectively and meaningfully, taking into consideration all the aspects of the child's development which contribute to the child's readiness.

Since little attention has been paid to the readiness of the child and less so on assessing children appropriately it is hoped that this study would be useful for Teachers and Principals.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction :

Reviewing the available literature in the field of pre-school education one is astounded by the fact that there are hardly any studies conducted in the field. A yawning gap can be seen as far as research in the area of pre-school is concerned. Searching through the Surveys of Educational Research one can see a glaring lacunae in studies on pre-school children or pre-school education. The number of studies undertaken at the pre-school level can be counted on the tips of one's fingers. Compared to the proportion of studies carried out in the primary, High School and Tertiary level, research in the area of pre-school is negligible.

Of the categories formed by Dr. Buch in the Survey of Educational Research there are none in the area of Pre-School education under the categories of Philosophy of Education, Programmed Learning, Correlates of achievement, Economics of Education and Educational technology. Correlates of achievement which is an important aspect of learning and which has been probed into by a number of studies in other stages is totally untouched as far as pre-school stage is concerned.

In the "Fourth Survey of Research in Education" edited by M.B. Buch a separate Chapter on Early Childhood Education has been included for the 1st time. This indicates that E.C.E. has come to be recognised as an important field though the trend report laments on the fragmental nature of studies and the lack of extensive and exhaustive tendency of studies.

Ofcourse, one heart warming indication is that there is a gradual increase in the number of studies conducted in the area of pre-school. In the first survey there are only seven studies documented which increases to nine in the second survey, whereas in the third survey there are as many as twenty-five studies conducted in the area. This trend is truly indicative of the gradual growing interest in the pre-school stage and in the fourth survey the trend seems to be maintained.

Since there were only a handful of studies enlisted at the doctorate level, the researcher scanned through studies conducted at the post-graduate level and came across a few at S.N.D.T. Department of Human Development, M.S. University Baroda (Department of Child Development) and Tata Institute of Social Sciences.

On readiness as such, the researcher could lay

hands on only one study at the doctoral level and a few at the Post-graduate level. Most of the studies were on the general development of pre-school children like motor-development, mental development or language development. Next in line came surveys of pre-primary schools and prevailing conditions of services for pre-school children.

The scene is very different when one comes to the studies done abroad. Research in the field of "Early Childhood Education" is so extensive and exhaustive that every area has been thoroughly studied in a methodical manner. Studies are on topics as varied as compensatory education, Readiness of pre-school children, Reading Readiness, School Readiness, Theories expounded by various experts, Methodological Surveys, Effectiveness of different curricular programmes and so on.

Of the studies that are available in the field of pre-school education they have been discussed separately in foreign and in the Indian context since they are neither comparable on quantity nor on quality.

(a) Researches conducted in India.

(b) Researches conducted abroad.

Research in India:

The areas under which the available researches in India have

been categorised are:

1. Developmental aspects of pre-school children.

2. Family and Cultural influences.

3. Assessment and Guidance &

4. Existing programme for pre-school children.

In India, of the studies conducted majority of the studies (nearly 40% of them) were studies related to developmental aspects of pre-school children. This is obvious since at this stage developmental traits play a very important role in the child's growth, learning and his ultimate ability to progress. Every aspect of the pre-school development is researched upon - motor, cognitive, psycho social, language and conclusions have been drawn.

Studies on family and cultural influences have been conducted mainly on disadvantaged and underprivileged children.

Different available services and programmes for the pre-school children is another area frequented by researchers, mainly to find out the existing conditions and available opportunities to pre-school children. There have been shockingly very few studies on 'Teaching & Teacher Behaviour & Teacher Education'. These too are mainly at the post-graduate level. Assessment and guidance is one area

where in India, hardly a handful of studies are conducted
whereas, abroad a sizeable number of researches are enlisted.

At the Post-graduate level in S.N.D.T. Home
Science and Child Development Department and at the M.S.U.,
Child Development Department, a number of studies revolving
around 'Pre-school children'are conducted. Though the
studies undertaken at the Post-Graduate level in M.S.U.,
Baroda are in the field of pre-school education, the studies
at SNDT are on 'Nutrition of Pre-schoolers and Family
influences'.

DEVELOPMENTAL ASPECTS OF PRE-SCHOOL CHILDREN

Arunjatai V and Srinivasachari G, studied the
"Functional Vocabulary of pre-school children", 1968. The
purpose was to study the Functional Vocabulary of children in
the age group 4 to 7, so as to develop quickly the abilities
of children, to read and write.

"Production of Mediation Deficiency in
children's free recall" was investigated by Saraswati T.S.,
1975. The result revealed deficit in the young children's
item recall and category organisation involving both
production and mediation deficiency.

The language development of Nursery and primary school children was researched by Chattopadhay, S.K., 1971. The findings were that language skill was directly related to age and hence to maturation. Children of educated parents were better than the children of less educated ones.

Badami C.H. investigated on some aspects of motor development among pre-school children, 1974 and identified motor skills as an important tool for diagnosis and school placement which could be used for effective organisation in selecting various activities for children.

Devi, C.L. has researched on "An Analytical Study of Social Development of Nursery School children" 1975 and concluded that favourable attitude to school was seen among the high socio-economic group.

Mathur P. studied the, "Personality Development of Pre-school children of working Mothers" 1971 and concluded that SES rendered the differences in home environment of the child on very many counts.

Patel, S.S. 1982 investigated on the role of general abilities of pre-primary school children in relation to reading readiness and found that the general ability was found to influence the achievement of the child of K.G.I and

K.G. II in all the components of reading readiness as well as in the overall scores of reading readiness.

A study of intellectual abilities and psycho-social motor behaviour among pre-school children was probed by Shahin A. 1971. It was revealed that Intelligence, motor, language and personal social behaviour developed in an inter-related manner. In depth study revealed interaction of Organism with Environment.

Intelligence was found to be highly co-related and deprivation having detrimental effect on space perception when intelligence was controlled in a study by Shukla P 1973.

A comparative study of Marathi Balbharati (Std I) Vocabulary and the vocabulary of pre-school children was made by Atre V.V., 1976 who concluded that there was no difference between the vocabulary of the children who had attended pre-school classes and that of children who had not.

Phukan D., investigated the effect of "Parental Bilingualism on the Acquisition of Language Skill of pre-school children", 1979. The study revealed that Bilingualism did not seem to be a serious handicap in linguistic development.

NCERT initiated a series of developmental studies in the late sixties and early seventies for studying the developmental characteristics of Indian pre-school children who were in the age group of 2-1/2 to 5.

Muralidharan (1970, 1971) has reported studies on the adaptive, personal-social and motor development of Indian children. The target groups were urban, rural and industrial children and great differences were found between these three groups. The study suggested that in order to reduce the gap between the three groups of children, it is important that compensatory pre-school programmes be made available to the rural children where they may use indigenous material.

Bevli 1974 has conducted studies on the language development of Indian children in the 2-1/2 to 5 years age group. The educational implication of the findings are evident. The lower development of rural children is primarily due to the lack of stimulating environment. To accelerate language development in pre-school years, more stimulating reading material needs to be provided to the children of rural areas.

"A few studies on the Developmental Aspects of Pre-school children were conducted at the Post-graduate

level, Department of Child Development M.S.U. Baroda as follows:

Shah L. conducted "A study of language development of pre-school children" 1970 and concluded that there was no significant age/sex difference in the language of the children.

"A study of Language performance of pre-school children with special reference to the socio-economic status" was researched on by Mohite. P. 1973 and found that children of higher socio-economic group are more advanced in their vocabulary as compared to lower socio-economic group.

In the field of studies on children's Abilities David S. has carried out on "observation and classification of children's Behaviour in the Nursery School and study of five children, Judged secure and five children, Judged Insecure" 1957 and has concluded that the secure children showed consistently more freedom and spontaneity, evidenced more socially integrative behaviour. They withdraw less from situations, were more purposive in their reactions, and used a relatively small amount of domination in confronting others.

"A study of Mental Abilities of a sample of pre-school children" was probed by Padma S.K. and Pankajam. B.

1965 and have summarised that as the age increased, the percentage of passes on difficult items also increases. This shows that as age increases the complexity in mental abilities develop.

Shelat. M. and Mishra N. researched on A comparative study of Cognitive Abilities, classroom adjustment and Scholastic achievement of first grade children with or without Pre-school experience 1972 and have concluded that Nursery School attendance appears to help girls in Cognitive abilities and classroom adjustment in first grade, but not in scholastic achievement.

"A comparative study of Cognitive abilities of Pre-school children exposed to 3 different curricula namely : Progressive, Montessori and Formal Teaching was probed into by Popat J. Barkataki M. 1976 whose results revealed that there was a significant difference at 0.5 level on the performance of Cognitive tasks in favour of the Progressive Curricula.

Two studies which have been located at SNDT University at the Post Graduate level are:

(i) Athalye, M., "Generosity in nursery school boys", 1983.

(ii) Bhat, M., "Language maturity of pre-school children in relation to their socio-economic status", 1987.

Family and Cultural Influences

Khandekar M. studied "The disadvantaged pre-schooler in Greater Bombay", 1973 and suggested that regular medical check-up, parent education in child care, immunization, providing nutritional supplements, recreational services and new paediatric centers should be started.

Kapadia. G.G. studied "The E.C.C.E. programmes for the underprivileged children 1968 and reported that a play oriented programme where children were free to play, discover and explore the environment and learn for themselves seemed to have worked well.

Mehta A.D. explored "the sex role identification of pre-school children from three socio-economic classes 1972 and concluded that pre-school boys and girls differed in the sex role preferences regardless of their belonging to a particular socio-economic class.

"Working Mother and Early Childhood Education" was studied by NIPCCD,1978 which came up with the finding that for the child's normal development an institutional set up of high quality for the children, during working hours, is very essential.

Saron   V. researched on "A study of Personality traits of Nursery School children against the background of their home environment", 1979 and found that curiosity, creativity, constructiveness and practical competence depend largely upon the presence of proper environment at home.

Misra   B.K.   1968 studied "The significance of cultural background in learning process and summarised that cultural   background plays a significant role in the determination of learning.

A   study of some aspects of physical growth of children from 2 to 6 years of age from urban and rural areas of Gujarat was carried out by Pathak, Y.C. 1975. The study revealed that each aspect increased with the increase in age and there were significant sex and area differences, boys being superior to girls and urban to rural in most aspects of growth.   The growth increased with the increase in socio-economic level.

Several studies were conducted at the post-graduate level at S.N.D.T. in the area:

Auddy,   S. : "Maternal employment the child's perspective", 1986.

Bhave, V. : "The influence of parents, teachers, peers

and school achievements on children's self-concept",
1981.

Bothra, B: "Mothers of pre-schoolers and sex-education,
1983.

Shah, A: Effects of maternal employment on children,
1983.

Mehta, V.H.: Social class and maternal punitiveness in
relation to child's aggressive behaviour, 1980.

Moochhala, M: Situational effect on the retaliatory
aggression in children at different age levels, 1987.

Pakkala R.: A study of working mothers and children,
1984.

Ali, J.R.: Achievement differences among children of
various ordinal birth position, 1985.

MEASUREMENT AND GUIDANCE

In the field of Guidance and Counselling,
"Behaviour problems of children - Pre-school and Early School
Age" was investigated by Muralidharan. R 1961, who revealed
that the total behaviour problems score is generally found to
decrease as the chronological age increases. Children of
middle-class and of employed mothers have more problems.

"Construction, and standardisation of Performance Test of Intelligence for ages 3 to 13 was researched by Bhatia H.R., Tandon R.K., Somvanshi A.K.S. and Saxena J.K., 1964.The test was validated against parents and teachers estimate of child's ability and scores on the Bhatia's battery of performance test.

Umrajwala U.R. studied "Construction and standardisation of reading readiness test for the children of Central Gujarat", 1977 and found that there was no sex difference with regard to reading readiness of the children. Children having pre-primary school experiences were better prepared for learning and reading than those who had not attended such schools.

Hemalatha, J. studied the "Measurement of Mental abilities of well-nourished and mal-nourished children", 1979 and found that the mental abilities of the well nourished and mal-nourished samples when matched with age, sex, family income and education attainments of parents, the former scored higher.

Pathak, M. studied "Influence of supplied cues in Human figure, Drawing of pre-school children", 1977 and found cues helped to improve the performance of Incomplete Figure (I.F.) test at the later stages. The facilitating

effect of cues started early for ears, arms and legs but only at late stage for eyes, trunk, feet and hair.   .

Srivastava, A.K. and Simhadri, R.A. constructed a "Test of Reading, Readiness and Mental Ability in First Generation learners". 1979.

The findings of the investigations were found to be related. Intelligence and age was positively related to reading readiness and the girls were better than the boys.

Children exhibited equal ability in taking verbal and non-verbal tests in a study by Krishnamurthy. A "Preparation of Materials to develop Reading readiness in children of pre-school age", 1971.

Desai S.H. prepared "Construction and standardisation of tests of language Development of Gujarati children of the age group 3 to 5", 1974 and summarised that the Language Development was highest in the beginning and slowed down in the next years.

Thakkar A.P. studied the "Curriculum in Pre-School Education", 1979 and evaluated the influence of the factors namely schools or socio-economic group effect and their resulting interactions.

Studies located at the Post-Graduate level of Department of Child Development MSU Baroda were:

Bhola R., researched on "A Study of Learning experience offered to Mothers of pre-school children", 1979 and has concluded that if the mothers are offered a learning programme, their children tend to perform better and if the same programme is offered at a minimal level in the presence of the child, then results obtained are significant. This finding has its implications in terms of investment of personnel and time while conducting a programme.

In the field of Readiness for First Grade, Jariwala. M. studied "Children's Drawings as an indication of general readiness for first grade". 1963 and has concluded that the scores on both tests, namely, evaluation of drawings and Draw-a-Man test indicated consistently higher trends for the girls than the boys whereas for teachers ratings, they were not consistent.

"A study of Factors Related to Reading Readiness leading to Reading Achievement in the first Grade" 1981, was carried out by Bhavnagiri N, and has revealed that the performance on the Crates Reading Readiness Test was positively related to the performances on the Reading Achievement Test.

Parekh, K. has investigated "A comparative study of the two groups of children to the First Grade -- One exposed to the normal kindergarten Programme and another exposed to a special Training Programme" 1970 and has come to the conclusion that on the overall performance of the experimental group made more gains than the control group in various sections of the Arithmetic Reading Test.

Children were prepared better for reading and adjusted to 1st grade, when exposed to special training programme has been indicated by Desai B. 1973, in "A comparative study of the Adjustment of the Two Groups of children to the First Grade - one exposed to the normal kindergarten Programme and another exposed to a special training programme".

Gupta R. has investigated "Development of a comprehensive Readiness programme for First Grade" 1980 and has concluded that the comprehensive readiness programme has been developed such that a teacher in any kind of setting may select activities on the basis of children's level of performances, and on the basis of the resources available.

"Development of a school Readiness Programme for Implementation in standard I of A Municipal Primary School in Baroda", was studied by Guha N. and Shah U., 1979. It is

evident from the major findings of the study that most of the children of the first standard were not ready to begin Formal Reading, Writing Arithmetic, Science, Social Studies at the time of entry. However, improvement were seen when a variety of experiences were provided through the Readiness Programme as the programme was individually paced. Further, it was also evident that such a programme can be incorporated within the normal school programme with relative ease.

Barkataki, B. has investigated on "Impact of Readiness Programme on Teacher and pupils of NPSS School of Baroda", 1981 and his recommendation was Readiness programmes or refresher courses on school readiness should be regularly conducted every year so that the majority of the primary teachers are covered and the influence of the programme is reinforced.

"A six weeks structured academically oriented Pre-school Programme for Non-exposed Children from low Income Group", was investigated by Patel. R. 1976. He has revealed that results on language and scholastic tasks indicated that sample showed marked gain in each item.

Pradhan, S. has probed on 'A study determining the effects of learning experiences offered to the mothers on Learning Abilities of Pre-school Children", 1976, and has revealed that the experimental group showed great improvement

in most of the items of the test than the control group.

Basu P. has investigated "A six weeks experimental pre-school programme based on progressive philosophy of Nursery school on a Non-exposed group of children from low income group" 1976. The results have indicated that the difference between the mean of pre and post test scores were significant at .01 level on the paired 't' test. Various recent studies show positive effect due to exposure to compensatory pre-school programme. Therefore this indicates that the programme has been effective and should be conducted to prepare children in developing the basic skills required for first grade.

Existing Programmes for Pre-school Children

Bapat, B.G. has researched on "An investigation into the conditions of pre-primary education in the Poona University area with a view to finding out problems and suggesting solutions to some of them".

Pisharody. S.B. conducted a "A Critical History and Interpretation of the Educational concepts and Methodology of the Montessori System of Education at the Pre-school stage" 1972.

Deka G. has studied "Organisation of pre-primary education in Assam", 1982 and lamented that a definite set of objectives for pre-school education did not exist.

Lina S. has studied the "Development and Evaluation of low cost Indigenous Food Mixes for Pre-Schoolers", 1980 and concluded that the food mixes possessed physiological tolerance and were well accepted by children.

"Country Report on child Development in India. Implication for policy and training" was presented by NIPCCD, 1980 and has surmised that there was a wide variety in the nature of teacher training programmes for pre-school education.

Survey of pre-primary institutions in Bangalore city Institute of social and economic change", was investigated by Rama Kumar V., 1979 in which he came up with the following findings. Most of the schools emphasised learning by mechanical skill and rote memory rather than logical and scientific learning methods. Strangely enough, they prescribed text books to children and taught English and Kannada alphabets in addition to number concepts and nature study, including science concepts.

Rao A and Choudary G. studied "The Balwadi programme in Pondicherry" 1979 and summarized that Balwadi programme fostered children's development..

Rao S.R. researched on "A study of the effects of pre-school education on Primary and Secondary school education" 1980 and concluded that the achievement of the children with pre-school education was higher than that of the children without such education in Class I. But this critical superiority seemed to get nullified in subsequent years and when children reached a higher standard (Class VIII) their performance did not differ significantly from that of the children who received no pre-school education.

"Management of Nursery" was probed by Somiah. M., 1980. It was found that the Corporation schools were better equipped in terms of black boards and aids for the development of knowledge.

Yeli R.S. has investigated on "A critical study of pre-primary education in Karnataka" 1979, and has found out that the nursery type of schools dominated the entire fabric of pre-primary schools in Karnataka.

Some studies were carried out at the Post-Graduate level in MSU Baroda.

In the field of Teaching and Teacher's Behaviour Sheshadri, S. 1976 has enlisted certain basic characteristics as most essential for being an effective teacher. These were - interest in children, confidence in self, cheerfulness and

sound knowledge and understanding about human growth and development.

Asher, P. has studied an "Inservice Training Programme for the Nagar Prathmik Shikshan Samiti (N.P.S.S.) Teachers of Baroda" 1979 and has identified the emphasis of the Primary School Teachers on reading and writing skills at pre-school level contributing to pressures on children and their development.

Few studies were conducted at the Post-Graduate Department of Human Development and Department of Post-Graduate studies and Research, in Home Science, S.N.D.T. University. They are:-

(a) "A study of Pre-School Education in Southern Bombay " by Laxmi S.. 1988.

(b) "A profile of pre-school Education In Northern Bombay" by Menon A, 1988.

(c) "A study of the establishment and development of 'balmandirs' in Gohlvad" 1965 by Bhatt and Indira.

(d) "A Study of profile of balwadis in Dharavi slums by Agarwal and Anuradha, 1988.

(e) "Profile of pre-primary teacher training institutions of Bombay" by Chachoria and Sujata, 1989.

Puri T. 1972 has summarised that it is important to determine the needs of the pre-school institutions for

planning of training programmes for the teachers.

Three studies are reported from Tata Institute of Social Science at Post-graduate level. A study conducted as far back as 1949 by Ms. Susheel B. Pendse was on "Pre-primary Education in Bombay city and suburbs". The study apart from finding out behaviour inadequacies in teacher pupil relation, teacher training, indoor and outdoor space provisions, emphatically concluded that pre-primary schools were not adapted to the child's needs.

Another study conducted in 1957 April by Ms. Khim May was, on "Nursery Schools and Day Nurseries in Rangoon". In this study the conclusions drawn were about inadequacies and suggested that the activities, routine etc. be based more on the needs of the child and that there should be teacher-parent association which would facilitate closer understanding between the two about the child.

A study was conducted on Parents' and Teachers' perception of the function of the Pre-primary school" by Radha Kumari, Rupa Surati, Shobha Vakil etc. in 1972, which indicated that the pre-primary schools served the purpose of helping the child adjust to primary school better.

RESEARCH ABROAD

As discussed earlier in the beginning of this chapter the scene is very different when one comes to the studies done abroad. Research in the field of Early Childhood Education is so extensive and exhaustive that every area has been thoroughly studied to a great extent.

The history of research in early childhood dates back to the first decade of the present century which began in 1904 with the work of Alfred Binet , a pioneering psychologist and physician. He thought 'that it might be possible to measure the difference between the behaviour of feeble-minded children and normal children and that such measurements could be used in planning school programmes'.

From then on studies conducted are as varied as Compensatory Education, Theories expounded by various experts, Methodological surveys, Effectiveness of different curricular programmes etc. Rane Spitz (1953, 1955) has reported the result of his observation of children in two institutions who were deprived of normal contact with their mothers or with their mother substitutes. Goldfarb (1943) peeped into the speech development of Institutionalised children. Sussan Issacs (1953) provided some suitable play experiences and studied the personal relationships of young children at certain age levels. Inhelder and Piaget (1964)

investigated into the stages of cognitive development of young children in terms of their genesis and structures. Barbel Inhelder (1982) of the University of Geneva has been an active collaborator of Jean Piaget.

There are studies which were started on compensatory Educational programmes, both in the U.K. and U.S.A. For example, the University College, Swansea (U.K.) conducted a project in comparative education which covered Longitudinal developmental studies and prepared suitable materials for language development of deprived children. The Perry Pre-school project (1962) was an experiment to assess the longitudinal effects of a 2 years pre-school programme designed to compensate for functional mental retardation. The most well known anti-poverty programme launched in the U.S.A. was the Head Start Project (1969) which was designed to improve the children's health and help in their social and emotional development.

In addition to these, there are projects which deal with the Methodological issues of teaching certain curricula. An example in this regard is Weikart's pre-school curriculum project (1968) which aimed at exploring the effect of three curricular styles including : 'Unit approach', 'Cognitive-based approach' and a 'Language training curriculum'. Torrance (1972) concluded a study on question asking skills and providing educational stimulation to young

children.

Having presented an overall review of the researches in Early Childhood abroad, these can be categorised into the following broad heads:

1. Developmental Characteristics

2. Family and Cultural Influences

3. Handicapped pre-schoolers

4. Curriculum and Methodology

5. History of Pre-school movement

6. Readiness

7. School Readiness

8. Compensatory/Enrichment/Intervention programmes

9. Screening devices devised

10. Concept theories

11. Programmes for Pre-school children

12. Teacher education.

Unlike in India where there were limited number of studies and even the areas on which research has been carried out are limited, all the available studies, including those at the Post Graduate level in E.C.E. have been reviewed.

Since, there are several studies conducted in various areas abroad, those research carried out in the following three areas only have been reviewed as they are

very closely associated with the present study. They are:--

1. Readiness/School Readiness

2. Compensatory and Enrichment Programmes

3. Screening devices devised.

READINESS

It is generally assumed that learning occurs best when people are ready to learn and that without being ready, little learning will occur (Sawyer, 1975).

Developmental psychologists have taken one of three perspectives on the question of maturation (Kohlberg and Mayer, 1972). From the nativists perspective development toward maturation is principally biological (genetic). Advocates of this perspective include Neill (1960) and Gesell (1954).

A second perspective - advocated by social learning theorists, behaviour modifiers, reinforcement theorists, and learning theorists - assumes that development toward maturation is largely environmental (Langer, 1969). Depending upon environmental design, one can effect varying outcomes of the developmental process.

Older children are more difficult to work with for they have had more environmental influences 'written

into' their developmental histories. Advocates of this perspective include Hull (1943), Guthrie (1952), Skinner (1953) and Bereiter and Englemann (1966).

The third perspective may be viewed as a compromise, for its advocates assume that development is the result of both genetic inheritance and environmental effects. Representatives of this perspective are variously referred to as Cognitive developmentalists, cognitive discovery theorists, interactionalists or structuralists. They include Piaget (1970), Bruner (1960) and Kohlberg (1969). These cognitive developmentalists assume that if the genetic and environmental conditions are appropriate, children will be ready to perform provided the children also perceive the situation appropriately (Werner, 1948).

Nearly all of the research on readiness is based on kindergarten or first-graders, although there have been some exceptions where the intent was to assess the predictive ability of readiness measures (Perry Guidubaldi and Kehle, 1979, Pikulski, 1973). Various populations have been investigated, including groups with upper-middle socio-economic status (SES) (Becher and Wolfgang), 1977) and lower SES (Scott and Kobes, 1975), innercity (Richek, 1977) and rural (Know and Glover, 1978) children, Latinos (Vincent, Bright and Dickason, 1976) and Orientals, Puerto Ricans and Eskimos (Mitchell, 1967).

Various measures of readiness have been employed in an effort to find the most useful instrument. The Metropolitan Wolfgang, 1977, Hayes, Mason and covert, 1975, Mitchell, 1967, Pikulski, 1973, Rude 1973; Vincent, Bright and Disckason, 1976), the Gates-Machinite Reading Test (Brekke, Williams and Harlow, 1973; Glazzard, 1979; and Shapiro, 1976) and the Gesell School Readiness Test (Kangman, 1971) have been employed. In addition, various self-concept measures (Flynn, 1975), piagetian measures (Becher and Wolfgang, 1977, Kanjman, 1971) and criterion-referenced measures (Gacka, 1978) have been assessed. Intelligence measures have also been investigated as correlates or indicators of readiness (Feshback, Adelman and Fuller, 1974; Huberty and Swan, 1974, Knox and Glover, 1978; Kohlberg and Gershman, 1973, and Telegay, 1976).

Obviously some standardized measures of readiness are better predictors than others (Kapelis, 1975). An expedient and useful measure of readiness is based on teacher's rating (Floak and Velicer, 1977; Glazzard, 1977, 1979). Yet one of the simplest measures of reading readiness is letter recognition. Simply seeing if children can recognise and recite the letters of the alphabet, serves as a reliable indicator of readiness to read.

There is little evidence to show that increased teaching of reading readiness skills ensures success in

learning to read (Rude, 1973). In fact there is no simple way to identify children who are likely to encounter reading difficulty (Pikulski, 1974) although it is likely that family size (Scott and Kobes; 1975), and socio-economic status (Telegay, 1974) affect readiness in predictable fashions; low SES children score less and children from smaller families score better.

On the other hand, it appears that the Western Institute for Science and Technology (WIST) Program can produce readiness skills in disadvantaged pre-schoolers (Vincent, Bright and Dickason, 1976). It is also clear that preschool educational experiences can benefit children's readiness to learn (Knox and Glover, 1978). This is especially so if early diagnosis of oral language deficits occurs (New comer and Magee, 1977). Attention to self-concept, delay of gratification and self-control are also recommended (Flynn, 1975). Even so, if a single prescription were offered to increase reading readiness, it would be to encourage children to recognize the letters of the alphabet (Hoskison, 1977, Richek, 1977-78; Telegdy, 1975).

School Readiness grew from the normative studies and publications of the Gesell Institute of Child Development at Yale University in the United States. The American pre-occupation with testing, especially for intelligence, dating back to at least 1917, was fed from 1940 on, by the age-

behavioural norms published by Gesell and his associates. The latter became concerned that developmentally immature children would suffer in school because of their unreadiness to meet the demands of teachers.

Research includes validating tests that purport to identify school readiness, developing programmes to overcome unreadiness and looking at long-term studies of educational effects of school unreadiness special placement, grouping or instruction are the methods being used to overcome or diminish school unreadiness.

At Yale University, the Gesell group attempted to evaluate the whole child, not just intellectual functioning. In fact. a socially immature but very bright child was designated as "Super-immature", one likely to experience difficulty in school (Ilgetal, 1964). Gesell attempted to define this "whole child" concept in terms of "adaptive behaviour", or "those behaviours which reflect the child's capacity to initiate new experiences and to profit by past experience", which included perceptual, orientational, manual, and verbal skills, as well as intellect (Gesell et al, 1940). According to the Gesell group, the child's actual behaviour at any age is the result of interaction of the child's genetic potential with the environment (Gesell et al, 1974).

The battery of developmental tests given by the Gesell group had seven parts, including an interview with parents (Flg. et al.1964).

Since the Gesell test battery, or any other, frequently yields an uneven profile of performance, sophisticated decisions, have to be made, by a trained teacher or guidance counsellor, as to school readiness. While tests may precede school entry, or promotion to first grade, by six months or more, late maturational effects may be ignored. The idea of a developmental quotient is evolved, not as a standard, but as a way to compare chronological with maturational age (Anes et al. 1979).

Many readiness tests have been developed, evaluated and used, in different ways. The Metropolitan Readiness Test is probably the most widely used test although it samples a narrow reading and mathematics (Saliva and Yesseldyke, 1978). K.G. Teachers often make readiness decisions, with or without the use of tests, by simple observation and interview techniques.

The major forms of research in this field have chiefly focussed on finding reliable predictors of learning problems, on programme of instruction which may overcome various forms of child unreadiness, and on long term studies of relationships of child characteristics, School

achievement, and various forms of intervention.

In attempting to find reliable predictors a long list of characteristics and conditions has been studied, including oral language proficiency, attainment of concrete operations (in the Piagetan sense), maternal intelligence, books in the home, cultural background, dentition, native language, birthweight, socio-economic status (SES), mental age, social maturity, ethnicity, drawing skills (for example in completing a drawing of a man), listening comprehension skills, and educational criteria, as well as the attitudes of school staff.

COMPENSATORY AND ENRICHMENT STUDIES .

There have been several notable attempts to stimulate readiness (Bronfen Brenner, 1974; Wargo et al, 1972, Legler 1970). Some of the most significant attempts were incorporated in Project Head Start and in Follow through (Maccoby and Lellner, 1970). The people connected with the children Television Workshop (Lesser, 1974) have also sought to assist children to become ready for school through watching "Sesame street" or for doing well in reading by watching "The Electric Company". Title I federally appropriated funds were used to help poor children of school age. A thorough review of the title I on compensatory education programmes (white, 1973) concluded that some

programmes are effective while others are not. The results
of carefully planned programmes such as "Sesame Street" also
indicate that children can be prepared for school and
assisted to do better if attention is given to making them
ready. (Lesser, 1974).

Turiel (1966) suggested that children are best
assisted towards development when instruction is slightly
ahead of the child's current level.

Bloom (1976) assumes that children can learn
anything if they are allowed to proceed at their own pace
with carefully designed instruction.

In addition, the educator is advised to avoid
classifying children under any label (Habbs, 1975, a 1975b)
Development of profiles identifying the child's specific
strengths and limitations are preferred.

The results of controlled, short-term
experiments on problem-solving have reported both successes
and failures, (Braimerd 1978). Frequent repetition of
reasoning strategies leads to retention with children who are
most ready to develop.

The major focus of early childhood programmes
for more than two decades now has been compensatory education

(Hellmuth 1970). Data indicated that low-SEL children whether from the slums or big cities (Deutsh 1963, 1964), the slums of the small rural towns of the South (Gray 1962), the Appalachian Mountains (Sherman and Key 1932), or the south eastern region of the United States (Kennedy, Van de Riet and white 1963) - performed below their middle - SEL counterparts on both intelligence and readiness measures as they entered school. Further, as they progressed through school a cummulative deficit in academic achievement scores was apparent (Deutsh 1964, Jensen 1966). This Cummulative deficit hypothesis was a basic part of the rationale for early compensatory education (Evans 1975). Gray (1962) suggested that low-income children might receive less, a more restricted range, or a different order of stimulation when compared with more affluent children.

Common practice in the nursery schools and kindergartens of the 1930s had been to focus on socialisation and mental health aspects of child development with a secondary emphasis on intellectual or academic domains (Sears and Dowley 1963).

The shift in early childhood education from a emphasis on socialisation and acculturation to a newer emphasis on the educability of intelligence, the malleability of the young, and cognitive development was reflected in the writings of Hunt (1961), Bloom (1964), and Mccandless (1952)

and in the experimental work of a number of social scientists beginning in the 1950's and early 1960's. These studies includes those of Kirk (1958), who studied the early education of mentally retarded children. Deutsch (1963), (1964), whose initial enrichment programme in early childhood with nursery, kindergarten, and primary age children was carried out in several schools in the Harlem district of New York City, Weikart (Weikart, Bond and Meneil, 1978, Weikart et al 1970), who worked with 3 year old children at home and at school in the Ypsilanti (Michigan) Perry pre-school project, Gray and Klaus, 1966, 1970; Klaus and Gray 1968; Gray et al 1965) who worked with groups of 3 and 4 year old children in Hurphreesboro.

A number of other studies that can be classified as experimental preschool compensatory programme began at about the same time (Early 1960s) or shortly thereafter. These early studies and reviews of them include Bereiter and Engelmann) (1966); Bissell (1973); Blatt and Garfunkel (1969), Bronfenbrenner (1974); Di Lorenzo, Salter and Brady (1969); Fourace, Connore and Goldberg (1962); Gordon (1967) Gordon and Guinagh (1974); Heber and Gardner (1975); Hardvitz and Paden (1973); Krnes et al (1969); Painter (1969); Palmer and Siegal (1977); Ryan (1974); Schaeter and Aarouton (1977) Skeel (1966); Springle Van de Riet and Van de Riet (1968); Stearm (1971); and White et al (1973). the sheer quantity and vigour of the research and discussion cited above were

the beginning of a revolution in early childhood education
(Hadger and Smith 1978, 1980) and quite rapidly yielded Head
Start and its family of programmes addressed to the needs of
low-income children. These studies also laid the foundation
for the development of a variety of instructional models that
were based on a range of different sets of guiding
principles, were focussed on a number of different goals, and
used alternative ways to teach children (Bisell 1973; Branche
and Overly 1971) (Gordon 1972, Weikart 1972). Some
programmes service their guiding principles from the
interactionists Cognitive theory of Piaget for example,
Weikart's cognitively Oriented Curriculum (Weikart et al
1971). Others are behavioural principles from operant
conditioning for instance, the Academic Preschool of Benetter
and Engelmann (1968). A third group maintains an allegiance
to the normative maturational principles that were
predominant in the traditional nursery and pre-school, such
as the Developmental Interaction programme of Bank Street
College of Education (Biber, Shapiro and Wicken 1971). Each
of these three specific examples of instructional models are
the preschool classroom or centre as a major means of working
with children, but the Cognitively Oriented Curriculum alone
adds home instruction. A fourth type of model based on
communication and social learning theories, uses television
as an alternative system for reaching children "Sesame
Street", the pre-school programme developed through the
Childrens Television Workshop (Lesser, 1974). There are
frequent examples of attempts to help parents become more

adept at their roles as educators. A middle - SEL
orientation in parent education was typical of the majority
of efforts upto the 1950s and 1960s, when experimental early
childhood education programmes began to focus on the less
well to do parent (Chilman, 1973).

The pre-school compensatory programs included a
parent-involvement component a parent-education component or
both.

SCREENING DEVICES DEVISED

Innumerable measurements/assessment devices can
be located in literature from abroad to screen readiness of
pre-school children. Most of them are those which can be
administered by teachers in school but a few have been
devised to be administered by parents at home. Some of them
can be administered in groups though most are to be
administered individually. They are:-

1.   The ABC inventory to determine K.G. and school
      Readiness, entrants to K.G. and Grade I 1965 constructed
      by Normand Adair and George Blesch.

2.   The Apell test - Assessment Program of Early learning
      levels, constructed by Eleanor V. Cochran and James L.
      Shannon, Edcodyne Corporation for ages 4, 5 - 7 (1969).

3. The Anton Brenner Developmental Gesalt Test of School Readiness devised by Anton Brenner, Western Psychological services for ages 5-6, 1964.

4. The Basic Concept Inventory Field Research Edition constructed by Siegfried E. Englemann, Fallet Educational corporation consists of Pre-school and KGN, 1967.

5. Harriet Seay Binion and Raland L. Beck devised a test called Binion-Beck Reading Readiness Test for Kindergarten and first grade published by Acorn Publishing Co.

6. Another test was devised by Mary Rodrigues, William H. Vagler and James F. Wilson and (Houghton Miffin Co.) on analysis of readiness skill, Reading and Mathematics for grade Kgn- 1, 1972 (1969-72).

7. Theodore Clymer and Thomas (Barrett, constructed a test called Clymer Barrett pre-reading Battery for first grade entrants which consisted of visual discrimination, auditory discrimination and visual-motor

8. The contemporary School readiness test constructed by Clara Elbert Sauer and published by Montana Reading Clinic publications is an unlimited test intended to be administered at the end of kindergarten or the beginning of first grade.

9. Group Test of Reading Readiness - the Dominion Test for

grades Kgn, Kgn-1 by the Department of Educational Research Ontario College of Education, University of To ronto,distributed by Guidance centre.

10. M. Lucile Harrison and James B. Strond constructed the Harrison Strond Reading Readiness Profiles for grades Kgn-1, using symbols, making visual discriminations (2 parts) using the context, making auditory discrimination, using context and auditory clues, giving the names of letters.

11. Delco Readiness Test first grade entrants 1970 scores, visual motor, visual discrimination, total Walter M. Rhoades, Delco Readiness Test.

12. Crates - Mac Grinite Reading Tests : Readiness skills, Grades Kgn-1; 1939-69.

13. The Gesell Developmental tests, Ages 5 -10, 1964-65; readiness to start school; individual, constructed by Frames R. Ilg and Rouise Bates Anes.

14. An Inventory of Primary skills, Grades Kgn - I; 1970; IPS.

15. Kindergarten Behavioural Index : A screening Technique for Reading Readiness Grade Kgn - I, 1972. KBI.

16. Kindergarten Evaluation of Learning Potential Kgn; 1963 - 69, KELP.

17. LRS. Seriation Test ages 4 - 6. 1968.

18. Lippincalt Reading Readiness Test (including Readiness Checklist) Grades Kgn - I; 1965.

19. Mc.Hugh - McParland Reading Readiness Test Grades Kgn - I, 1966.

20. Metropolitan Readiness Tests. Grades Kgn - I; 1933 - 69 MRT constructed by Gertrude H. Hildreth, Nellie & Griffith and Marry E.Mc Gauvram Harcourt Brace Jovanorich Inc.

21. Maturity Level for School Entrance and Reading Readiness Grades Kgn - J 1950-59.

22. Parent Readiness Evaluation of Pre-schools Test. Age 3 - 4 to 5 - 8. 1968 - 69.

23. Pre-Reading Assessment Kit. Grades Kgn - I 1971 - 72 PRAK.

24. Preschool and kindergarten Performance Profile. Preschool and Kgn 1970. PKPP

25. Primary Academic Sentiment Scale, Ages 4 - 4 to 7 - 3 1968.

26. Reley Preschool Developmental Screening Inventory Ages 3 - 5, 1969.

27. The School Readiness Checklist Ages 5 - 6, 1963 - 68.

28. School Readiness Survey Ages 4 - 6 1967-66.

29. The Steinbach Test of Reading Readiness. Grades Kgn – I, 1965-66.

30. Screening Test of Academic Readiness Ages 4 – 0 to 6 - 5, 1966.

31. Sprigle School Readiness Screening Test Ages 4 – 6 to 6 – 9, 1965.

32. Watson Reading Readiness Test Grades Kgn – I 1960.

From the above discussion it can be easily summarised that there is an urgent need for more emphasis on research in the field of Preschool Education. Studies in Indian context are already rare and it would be more appropriate to have our methods on the findings with reference to Indian requirement. Teacher education another neglected area needs to be researched so that readiness of preschool children can be strengthened. Finally since India comprises of a major chunk of it's population belonging to the disadvantaged and underprivileged sections of society, research in this area concerning preschool education needs special attention.

CHAPTER III

THE RESEARCH DESIGN

Introduction

Readiness is necessary for any task to be undertaken. The child who is scholastically ready is able to take up tasks expected of him by the school more easily and efficiently than the one who is not. Knowledge about the child's readiness would enable educators to provide an active and meaningful environment. Hence, the study aims at probing into the area of school Readiness, investigating into the factors that contribute to 'Scholastic Readiness' (S.R.) and enlist the characteristics that are associated with 'Scholastic Readiness'.

The present study seeks to describe the 'Scholastic Readiness' of Pre-School children, examine its influence on the 'Academic Achievement' (A.A.) and the 'Personal Abilities' of the child and delve into the factors in the home affecting it.

The study could be broadly categorised into two stages. The first stage which deals with the Readiness aspect of Pre-school children and its influence on their 'Academic Achievement' and 'Personal Abilities'. As the S.R.

of P.S.C. was probed into it was found that the 'Home' exercised a very strong influence on the S.R. of the child. So, it was decided to scrutinise the 'Home Environment and Background' and study it's effect on the child's S.R. Hence, the second stage deals with 'Scholastic Readiness' as a factor and the influence of Home Environment (H.E.) of the child on it. Hence, in this study, S.R. is both a dependent and an independent variable. In the first stage, S.R. is the independent variable and the A.A. the dependent variable. The attempt here is to find out what influence does S.R. exercise on A.A.

In the second stage, S.R. is a dependent variable and H.E. is the independent variable. Here it is attempted to find out how far S.R. is dependent on the H.E., or in other words how does H.E. influence the S.R. of the child. Thus, the variables of the study are as follows:-

1.   Scholastic Readiness (S.R.)

2.   Academic Achievement (A.A.)

3.   Personal Abilities (P.A.)

4.   Home Environment (H.E.)

The aspects included in this study under each variable are given below :

(1) Aspects of Scholastic Readiness

(a)   Motor Skills

(b) Cognitive Skills

(c) Psychosocial Skills

(d) Comprehension of English Language

(ii) Aspects included in Academic Achievement:

(a) Language

(b) Number Work

(c) General Knowledge

(iii) Aspects covered in Personal Abilities are:

(a) Other Activities

(b) Self Attributes

(i) Personal Data

(ii) Mental Abilities

(iii) Social Skills

(iv) Personality Traits

(iv) Aspects of the Home Environment are:

(a) Home Background

(i) Education of Parents

(ii) Education of Mother

(iii) Education of Father

(iv) Occupation of Mother

(v) Occupation of Father

(vi) Socio-economic status

(vii) Number of Siblings

(viii) Residential Area

(b)   Parental Involvement

    (i)   Attitude to Child Rearing

    (ii)   Actual Handling

    (iii) Parental Expectations

    (iv)   Personal relations

    (v)   Facilities provided

    (vi)   Preparation of the child

(c)   Parental Interest.

Methodology :

The purpose of the study is to investigate into the Scholastic Readiness of Pre-school   children,   the associated aspects in the child and at home and its influence on Academic Achievement. The study is mainly an exploratory one. A tool to describe and measure scholastic Readiness and a tool to describe and measure Home Background were devised by the researcher.

The method used is the descriptive method of the correlative and the comparative types.   It attempts to describe the components of Scholastic Readiness of the Pre-school children, the characteristics of Scholastic Readiness of Pre-school children and the aspects involved.   It also attempts to study the influence of Scholastic Readiness on the Academic Achievement and the Personal Abilities of the

child. Lastly, it attempts to describe the environmental conditions at home delving deep into the home factors that influence the child's Scholastic Readiness.

It attempts to compare children with different levels of S.R. on A.A. and find out the correlation between S.R. and A.A. Comparison of children with different levels of P.I. and H.B. on S.R. is also attempted.

The study went through the following stages:-

To begin with to enlist the factors associated with scholastic Readiness, a preliminary study was conducted on the children studying in the Pre-school section of S.I.E.S. High School. The characteristics and aspects associated with the high scorers and the low scorers were enlisted.

After this, the literature on 'Readiness' was scanned and the developmental norms laid down by experts were checked. Encyclopedia of education and Encyclopedia of educational research, International Encyclopedia of education were also studied.

The norms laid down for devising a tool, the precautions to be taken while constructing a tool for the very young ones and the aspects to be considered while

constructing an interview schedule were studied.

A tool was constructed to measure the Scholastic Readiness of the child. This was the "Scholastic Readiness Screening Device".

To study the factors that promote and influence Scholastic Readiness, an interview schedule was constructed to interview parents and enlist factors that are associated with Scholastic Readiness.

Thus, the study attempted to describe in detail the concept of 'Scholastic Readiness' of pre-school children, the influence of 'Home Environment' on 'Scholastic Readiness' of Pre-School children and the influence of Scholastic Readiness' on the 'Academic Achievement' of children.

Attempt is made to compare children at different levels of 'Scholastic Readiness' and their 'Academic Achievement' scores. The effort here is to find out whether Scholastic Readiness exercises any influence on the Academic Achievement of the child, whether there are any differences in the Academic Achievement of children with different levels of Scholastic Readiness. There is an effort made to correlate the Scholastic Readiness scores and their Academic Achievement scores to find out whether there is any correlation existing between Scholastic Readiness of children

and their Academic performance. This would indicate whether S.R. has any influence on A.A. of children.

Attempt is made to compare the S.R. of children with different levels of Home Environment to find out, whether, there is any significant difference in the S.R. of children coming from different types of Home environment i.e. whether 'Home Environment' influences the 'Scholastic Readiness' of children.

Scholastic Readiness is correlated with Academic Achievement at different stages - at the two Unit Tests, at the 1st Semester exam and the 2nd semester exam to find out whether Scholastic Readiness has any relation with Academic Achievement.

Besides studying the direct relationship between Scholastic Readiness and Academic Achievement, and Scholastic Readiness and Home Background, different groups were formed on the basis of high, moderate and low scorers on Scholastic Readiness and these groups were compared on Physical - Motor skills, Mental traits, Psychosocial traits and personality characteristics on the basis of the ratings given by the teacher in the class.

An effort has been made to group the children into different categories on the basis of Parental Interest and Parental Involvement and the differences that exist in

them as far as Scholastic Readiness and Academic Achievement are concerned, were studied.

For the purpose of testing the hypotheses and description of the data, the scores of Motor, Cognitive, Psychosocial and Comprehension of English language, were examined and compared, both separately and as a whole, since, it would then give an exhaustive picture of the whole concept of 'Scholastic Readiness'.

Sample: The study aimed at investigating into the Scholastic Readiness of pre-school children. The population of the study was the pre-school age children.

Sampling Method: Incidental sampling method was used i.e. the children who were studying in S.I.E.S. - those who sought admission and were admitted, formed the sample for the various aspects of the study. They consisted of both boys and girls between the ages of 3 to 4 years. The sample is basically urban in nature. They belonged to middle S.E.S. and lower S.E.S. families.

Nature & Size of the Sample:

Preliminary Study: Children studying in the year 1985-86 batch numbering 484 comprised the sample for the preliminary study to investigate into the characteristics associated with scholastic achievement and enlist them.

Pre-Test: 15 children were selected at random from those who sought admission in 1986-87, to conduct a pre-test to determine the administration procedure of the screening Device.

Pre-Pilot 50 children were selected again at random from those who sought admission in 1986-87. The screening device was administered to determine the discrimination index and for item analysis.

Pilot-Study: 344 children who sought admission in 1986-87 for Jr. K.G. Class comprised the sample for administering the final form of Scholastic Readiness Screening Device to establish the reliability.

Final Sample: Children admitted in S.I.E.S. in 1987-88 numbering 337 of which 308 continued in the school, comprised the sample for describing the S.R. of pre-school children, studying the influence of the home background on it and examining its relationship with A.A. and for determining the validity of the tool i.e. the predictive validity of the Scholastic Readiness Screening Device.

Parents of these 308 children were called for interviewing them to ascertain the Home Environmental factors contributing to scholastic Readiness. Table 3.1 shows the Nature and size of the sample.

TABLE 3.1

NATURE AND SIZE OF THE SAMPLE

AT VARIOUS STAGES OF THE STUDY.

Nature of Work/Stage	Year	Boys	Girls	Total Sample
Preliminary Study	1985-86			
	Jr.K.G.	139	124	263
	Sr.K.G.	114	107	221
				484
Pre-test	1986 Jan	8	7	15
Pre-Pilot	1986 Jan	27	23	50
Pilot Study	1986 Feb			
Screening		244	179	423
Selected		213	158	371
Took Admission		201	138	344
	1987			
Screening		279	178	457
Selected		230	139	369
Took Admission		213	124	337
Interview of parents	1987	177	101	278
Final Sample				
Sample for prediction	1987			
Took Admission		213	124	337
With us		199	109	308

Tools Used: To collect the required data necessary to investigate into the Scholastic Readiness and the influence of the Home Environment, appropriate tools were required. The researcher looked around and found that there were a few tools devised at Post-Graduate level or at the individual/institutional level but the validity and the reliability were not established. The tools devised abroad did not cater to Indian conditions, since they were devised for a different population; they would, ultimately, be biased and it would be futile m~'ing use of them. Hence, the researcher decided to evolve a screening Device herself.

The data required for the study were in the following areas:

(a) Scholastic Readiness of the Pre-school children

(b) Academic Achievement of the Pre-school children.

(c) Personal Abilities of Pre-school children.

(d) Home Environment of the Pre-School children

Hence tools were required to measure the:

(1) Scholastic Readiness of the children

(2) Academic Achievement

(3) Personal Abilities

(4) Home Environmental Factors

Some kind of a tool was necessary which would help one to enlist the characteristics of a ready child and

help to screen children at the time of entrance to school and measure the readiness aspect.

A tool was also necessary to measure the 'Home Environmental' factors that influence the S.R. of a child.

To measure Academic Achievement of the children, marks were taken from the School Report Card .

The data for testing the hypotheses were collected with the help of the following tools for measuring all the above mentioned aspects in the study. These can be grouped into those that were adopted from the school records and those that were devised by the researcher. Given below are the details of tools used in the present study:

Tools devised by the researcher :

(A)   Scholastic Readiness Screening Device,

(B)   Interview Schedule (For Parents).

Data from School Records:

(A)   Check List

(B)   Rating Scale

(C)   Personal Data Sheet

(D)   Progress Report Card.

Devising A Tool To Measure Scholastic Readiness:

To assess Scholastic Readiness of the pre-school children, a screening devise was required to measure it. As mentioned earlier, a suitable device was not available, and hence a device had to be developed separately.

This device had to be based on factors and aspects responsible for readiness for learning. Learning does not take place only through the intellect as is thought commonly - there is a multiplicity of factors that operate in the learning process.

Intellect is a facilitating agent in learning but emotions are recognised as the motivating force in all learning. Therefore, when one takes up the responsibility of assessing readiness, one will have to consider, not only the intelligence of the child and his cognitive skills but also his emotions and other related aspects. It is the total child that readies for learning and the schools that are to play an important role in the education of a child have to develop the strategy of understanding the child as a whole.

Importance of Measuring the Right Thing:

The foremost task while going about devising a tool was to identify the specific aspects that would aid in

measuring the Scholastic Readiness. The effectiveness for description of any object or person depends upon two things — how wisely the features to be described are chosen and how truly and accurately they describe each one. A description may fail to be useful, for, the need at hand if irrelevant features are chosen to describe.

The first and, perhaps, the most important step in our measurement task was defining what is that is to be measured; otherwise, the objectives are likely to be incompletely formulated and expressed in vague terms. The concepts had to be clarified and made more specific before progressing towards sensible procedures of measurement. Until it was decided what is meant by readiness or what behaviours are exhibited by a person who shows Scholastic Readiness, there was little prospect of developing procedures to apprise either the one or the other.

Hence, to begin with, it was decided to conduct a preliminary study at the pre-school section of the S.I.E.S. School to probe into the characteristics of children at different levels of performance.

Preliminary Study:

An indepth study was conducted on 484 children

studying in the 1985-86 batch to ascertain the specific features and characteristics associated with school performance. The check list administered by the teachers to note the various characteristics and traits of individual children in the pre-school section was used for the preliminary study to enlist the specific features associated with the child's performance in school.

Check List

The check list had the following 4 areas :-

(I) Individual Traits

(II) Academic Performance

(III) Other Activities

(IV) Comprehension of English language

Each area had the following sub-areas:

_____

I. Individual Traits: Personal Data

    Three major categories   Personality Traits

    for individual traits
                                        Mental Abilities

_____

II. Academic Performance   Language

    Three major categories   Number Work

    for academic performance
                                        General Knowledge

_____

III Other Activities   Drawing

    Five major categories   Painting

    for other activities
                                        Claywork

                                        Puzzle

                                        Paper folding &

                                        sticking

_____

IV Knowledge of English language:

    One category for knowledge

    of English language;

    Understands English and speaks fluently.

    Understands English, but does not speak fluently.

    Does not understand English and does not speak.

_____

Following are the aspects included in each of the sub-area, viz.,personal data:

In Personal Data	In Personality Traits:	In Mental Abilities
Physical Development	Leadership Qualities	Attention Span
Height	Mixes freely	Observation
Weight	Speaks Freely	Curiosity
General Health	Co-operation	Memory
Cleanliness	Cheerful	Receptivity
Discipline	Moody	Retention
	Poised	Recall
	Restless	
	Confident	
	Hesitant	
	Self Reliant	
	Dependent	
	Generous	
	Self-Centered	

In Language	In Number work	In General Knowledge
Recognition	Counting	Information on various
Reading	Recognition	matters like months of
Writing	Writing	the year, days of the
Conversation	Spelling	week, names of fruits,
Singing & Recitation		vegetables, animals,
Singing with action		flowers, birds and
		shapes.

In Other Activities	In Knowledge of English Language
Drawing	Understands English and speaks fluently.
Painting	Understands English, but does not speak
Clay work	fluently.
Puzzle	Does not understand English and does not
Paper folding and	speak.
sticking	

The teachers checked the individual traits 4 times a year in August, October, January and April and marked them as follows:

A + if they were very good

A if they were good

B if they were satisfactory

C if they were fair

D if they were below average

There were 5 divisions of Jr. K.G. and five divisions of Sr. K.G. From each division the top ten rankers and the bottom ten rankers were chosen for the preliminary test. Thus, in all, there were hundred top rankers and hundred bottom rankers in Academic Achievement scores (ranking was mainly on the basis of Academic Performance, i.e. scores obtained in different tests in school).

Children were ranked in language, number work and General Knowledge based on different tests and exams - 2 Unit Tests, 1st Semester and 2nd Semester. The marks obtained by each student in all the tests were totalled up and the children were arranged in the descending order. Thus, from each section of the ten sections in the school (5 in Jr. K.G. and 5 in Sr. K.G.) the top ten scorers and the bottom ten scorers were taken up for the preliminary study. This amounted to 50 high scorers from the Jr. K.G. and 50 high scorers from Sr. K.G. totalling to 100 high scorers and 50 low scorers from Jr. K.G. and 50 low scorers from Sr. K.G. totalling to 100 low scorers.

It was found that the high Academic Achievers consistently scored "A+" or "A" in all the columns, whereas, the low Academic Achievers consistently scored B, C or D. The high scorers did not score a single C or D, whereas, in contrast, the low scorers did not score a single 'A+'.

Investigating into the characteristics of low Academic Achievers and high Academic Achievers, it was found that family size, S.E.S., order of birth, education of parents particularly of the mother and profession of parents were all positively related to the performance of the child. Higher the presence of the above mentioned factors superior is the performance of the children and lower the above mentioned factors inferior is the performance.

The high-achievers had specific traits. Their general health condition was better, they followed cleanliness and routine diligently, and were far more disciplined. They displayed leadership qualities, mixed freely, spoke unhesitatingly, were very co-operative, cheerful, poised and their social adaptations were high. As for the personality traits, they were more confident and self-reliant. In the case of mental abilities, their attention span was longer, they were more curious, keen observers, had good memory, high retention and recall and very receptive to everything. They performed very well in language, in recognition, reading, writing, singing with action, etc. As far as Number Work, their counting, recognition with spelling, general knowledge they were very good since they scored "A" grades in them.

In other activities too like drawing, painting, claywork, paper folding and sticking they excelled.

In contrast, the low scorers were found to be lagging behind in all these aspects. Their general health condition was inferior, cleanliness was not followed, they were highly indisciplined, lacked leadership qualities, were not social, non-co-operative, did not mix freely and had communication problems. Some of them were very moody, anxious, hesitant, not at all confident, not self-reliant and were found to be very dependent. As for their mental abilities, their attention span was very short, they lacked

in memory, receptivity, retention and recall, had difficulty in reading, writing, arithmetic work and were poor in recognition and discussion. The preliminary study confirmed that it was not mere cognitive abilities, but developmental aspects in totality that contributed to the child's performance. Children scoring high, academically were definitely superior in all their developmental aspects, physical, mental social and personality.

Procedure of Devising a Tool:

The literature regarding Scholastic Readiness were scanned to investigate into the concept. Encyclopaedia of Educational Research, Encyclopaedia of Education, the developmental norms and tasks laid down by Child Development experts and other related material were studied and the components, characteristics, aspects and factors influencing Scholastic Readiness were compiled.

A survey was conducted by visiting nursery schools all over Bombay (Appendix 1) to ascertain the method for screening, interviewing, and admissions. This gave an idea of the magnitude of problems revolving around the admission procedure and the assessment of the readiness of the child.

All the schools said that they did not have any kind of methodical system to screen children. They had devised their own method through experience. Almost all the schools followed the system of asking questions like "What is your name", etc...then asking them to name objects, pictures, etc. Some of them allowed the children to enter with parents while some schools expected them to come alone. Here the researcher observed that children were often torn away from parents, screaming and wailing. All this produced a lot of anxiety and tension in the minds of the tiny-tots. The entire atmosphere during screening in all the schools observed, was charged with tension.

During discussions, the schools that were visited agreed that the system that they followed was not satisfactory - that they were not successful in the task of screening. All of them expressed the need for a more suitable and appropriate screening device.

The fourth step in the procedure of devising an appropriate tool for screening the Scholastic Readiness of pre-school children was scanning literature regarding preparation of screening devices. All the norms and regulations laid down by different experts in the procedure of preparing screening devices were thoroughly studied. Different types of screening devices that are available were also scanned. The norms set especially for devices in the

educational field and specifically for pre-school children
were probed into.[1] This enabled the researcher in enlisting
the essential components necessary in formulating an
appropriate device to assess Scholastic Readiness.

The task of preparing the screening device was
taken up with the necessary points in mind. The foremost
problem in the development of the screening device was the
selection of items which could possibly assess the necessary
traits of readiness.

RATIONALE FOR SELECTION OF ITEMS

As discussed earlier, there was hardly any tool
available in India to screen Pre-school children for
scholastic Readiness. Tools constructed abroad by different
authors lay different emphasis and are for a different
population as its subjects. So to suit the local conditions
and the definitions formulated for the study the present tool
was constructed.

The few existing instruments devised are heavily
loaded with verbal ability and hence, they may not do full

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[1] Linchestein, R., Ireton, H. : Pre-school Screening.
Florida. Grune and Shatton 1984

justice to those individuals who are low in verbal ability, since children, at this stage, have not developed their verbal ability fully. The main concern was to develop a device which can be administered to the pre-schooler easily without any elaborate procedures and which may later be also used by pre-school teachers for continuous evaluation of children. Though no tool was adopted directly, the literature[1] on the following tools was found to be very valuable in providing the rationale and the outline for the development of the present text of Scholastic Readiness.

A.   Minneapolis Pre-school Screening Instrument (MPSI)
                                                (Lichenstein, 1980 b).

B.   Minnesota Pre-school Inventory (MPI)   (Ireton   and
         Thwing, 1979).

C.   Development Indicators for the Assessment of Learning
         (DIAL) (Mardell and Goldenberg, 1975).

        The following papers presented in the 22nd Annual Conference of the Indian Association of Preschool Children Nov. 1986 were also helpful

A. Towards developing an assessment checklist for pre-
     school years. Sharma A., Roy G., Mistry V., M.S.

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1   Linchestein R., Ireton, H. : Op. Cit.

University, Baroda 1984.

B. Developmental Assessment : A tool for the teacher.
Sharma N., Sharma B., Anandalaxmi B., Lady Irwin
College, New Delhi, 1984.

C. Teachers Rating Scale : An Assessment tool. Mohite P.,
Shastri J., M.S. University Baroda, 1983.

D. Developmental Assessment of Pre-school Children. Parekh
K., Shukla S., M.S. University Baroda.

The tool items were selected on the basis of
developmental norms laid down by experts and taking into
consideration the different aspects influencing Scholastic
Readiness in totality.

The guideline was that areas that are most
relevant to a child's success or failure in school, be given
importance as laid down in the Encyclopaedia of Education.
Then, a review of tools and kits already devised for
assessment of nursery children was made. This was followed
by systematic observation of children in the pre-school
section of the school.

The foremost point in mind while collecting tool
items was selecting items which are appropriate to be used in

the class-room situation, with the pre-schoolers who are just
entering school and without any sophisticated equipment.   A
number of items which may suit the situation were listed   to
make a choice of tools out of a large number, to ensure their
usability   in   the   local   conditions.   These   again   were
discussed with the guide, with the personnel working in the
field and observation of the pre-school children at   S.I.E.S.
school in the different classes. The items   thus   collected
are listed in Appendix 2.

The collection of tool items thus went through the following
stages:

(1)   Pre(Initial)study

(2)   Discussion with the personnel working in Pre-schools.

(3)   Observations in the Pre-school sections

(4)   Literature on Pre-School children and Readiness

(5)   Norms laid by experts of tools constructed.

(6)   Literature   on   different   available   tools   and
        measurement instruments.

        The   scanning of literature confirmed   the   fact
concluded in the preliminary study that all the developmental
aspects influenced children's performance. Hence, every area
of development was included while compiling the screening
device to measure Scholastic Readiness.

A holistic approach in screening was essential. It was necessary to include the whole child for screening. The whole child includes the physical self, the emotional/psychological self, the social self and the mental/cognitive self.

Thus the screening device included all the development areas of the child. Ofcourse, it is not possible to separate the developmental abilities into distinct and non-overlapping categories. They are all interrelated, one influencing the other and only for technical purposes are they discussed under separate heads.

The areas included in the screening device are :

1. Physical/Motor Skills
2. Mental/Cognitive Skills
3. Psychosocial Skills &
4. Language Skills

The physical/motor development has been included because it is basic to emotional, intellectual and social development of the child. When the young child's abilities and capacities have not developed to the extent required or essential, then the consequent stresses and strains of the learning environment interfere with the child's learning and development.

The mental/cognitive function was included because it goes without saying that this is a basic requisite for any learning. It is important to understand the biological pace of a child's natural intellectual growth and development. Language development and communication skills basic to full intellectual development have also been considered. Language is difficult to be distinguished from the cognitive area since major part of cognitive functioning involves processing of verbal material and relies upon comprehension of language. Language functioning can be divided into two general components, receptive language which involves decoding and comprehension of verbal material and expressive language, the formulation and expression of thoughts in verbal forms. The decoding aspect of receptive language may be regarded as encompassing, perceptual processes such as auditory reception and discrimination which are prerequisites for higher order processing of verbal information. Expressive language pertains to aspects of verbal output, such as, syntax, grammar and word use. As the young child's expressive language capabilities lag far behind what he or she is able to comprehend, his receptive language was mainly taken into consideration.

Speech too was included which indicates how capable he/she is in formation of sounds. Speech involves the child's proficiency at producing desired speech patterns so as to be comprehensible to others.

The emotional/psychological aspects have been included because if the child is not emotionally ready, the stresses and strains of the educational system shatters the emotional stability. Negative attitudes of lack of self-confidence, inferiority complexes and lack of initiative take deep root through their school work. The emotional unreadiness can most certainly interfere with the intellectual performance of the children.

The social adaptation has been taken into consideration since it also influences the child's learning processes. If he/she is unable to interact with the peer group, adjust and accommodate to the requirements of the social group, he/she may perhaps have difficulty in learning through group processes.

Following are the criteria on the basis of which the items in the preliminary draft were included before the eventual selection:

(a) Items which take care of the developmental aspects of children at this stage.

(b) Items which will be interesting enough and get maximum involvement from the children.

(c) Items with which children are familiar.

(d) Items which will be relevant and enable the children to attempt easily.

(e) Items which would be understood easily.

(f) Items which will demand minimum of verbal response.

Nature of Items:

The items were both of performance type as well as verbal type. There was a good balance between these two. The items chosen and compiled were such that children of 3+ age should be able to tackle them easily according to norms laid. The screening was conducted in a gradual manner and did not take place all of a sudden, which may be very traumatic for the child. The items were within the understanding capacity of the children in this age group. The items had enough scope for varied, extensive and possible valid responses which the children could provide with their limited experiences. Since the device included observation of children by letting them play and engage in activities in groups, it gave a complete picture of the child as a whole.

Validity

Validity concerns the crucial question "How well does a measure do, what it is intended to do?" In the case of the screening device in question the objective is to identify those individuals who are scholastically ready or unready.

Content validity pertains to evidence that a test or

instrument contains the right stuff. That is, the instruments content should be consistent with the domain of skills, abilities or behaviours that the instruments purports to measure. The content validity was established both by building the device systematically on the prescribed norms of developmental scales laid down by experts in the field of child development and by getting the approval of 10 educationists.

The preliminary draft was given to 10 experts working in the field of Education, Guidance and counselling. (Appendix 3). The purpose of devising a tool was explained and the aims of the study listed. They were requested to go through the items in the preliminary draft carefully and score each one of them between 1 to 5 on the basis of appropriateness and suitability.

After collecting it from all the experts, the items were coded and those that were approved by atleast 7 of them were enlisted. Thus a draft form (Appendix 4) of Scholastic Readiness Screening Device was compiled and prepared.

Pre-Test:

The items were tried out on a very small sample of about 15 children just to get a feel of how long it takes

to administer the screening device on children, what are the hindrances and how children respond to these items. Discussions were held with teachers and others in the field of pre-school, to find out whether the items were appropriate. After the collection of items, the time taken by each child was noted down, which facilitated fixing-up of appropriate time limit in the final draft. At random, 15 children - 7 girls and 8 boys - were selected to go through the screening device. The administrative procedure was decided - the ways in which the children would be screened which is discussed in following paragraphs.

After this, following items were eliminated, as administration was very difficult. The colour matching and shape matching, found very interesting by children were deleted, since children took long to complete them. It was realised that these items which seemed to be very lengthy requiring longer duration for attempting, made children lose interest. There was also a tendency to avoid complicated and difficult ones. The visual discrimination item was dropped on this account since children found it too complicated and difficult to be attempted.

Then, the compounded items were enlisted. A draft form of scholastic readiness screening device was prepared, consisting of 10 items for children and 8 items for observing children.

PRE-PILOT STUDY

The pre-pilot study was planned and conducted firstly, for item analysis and secondly, to determine the method of scoring. The pre-pilot study was conducted on a sample of 50 children, selected at random from those who sought admission in 1986-87, and the facility value and Discrimination Index was worked out.

One of the most important step in the development of the psychological tools, is item analysis - Garret(1973),[1] claims that employing item analysis infact improves the validity and reliability of tests. Guilford (1954)[2] asserts them in order to obtain an objective information concerning the test items, including item analysis, as unquestionable. Item analysis primarily concerns itself with item difficulty and item discrimination. Item difficulty is taken in terms of the proportion of individuals completing the items successfully and discrimination index refers to the degree to which it differentiates between those obtaining high and low scores.

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[1]   Garrett, N.E. :- Statistics in Psychology and Education. New York. David Makay Co. 1973.

[2]   Guilford, J.P. :- Psychometric Method. (2nd Ed.). New York. McGraw Hill. 1954.

children who function within age expectations and the few who are notably below. Following items which had the discrimination index below 0.20 were modified and eliminated.

The observation of "Fine and Gross Motor Skills" were eliminated since it did not discriminate between high and low scorers. Most of the children seem to be having a reasonably developed Motor skills, expected of a 3 year old. Again in "Ability to Try Out/Persistence", "Emotional Stability and Maturity" most of them scored low since they were anxious and tensed.

Scoring: Equal Weightage was given to all the three areas viz:

> Physical/Motor skills
>
> Cognitive skills
>
> Psycho & social skills

Each of the abovementioned area carried 30 marks and 10 marks were allotted to the child's Comprehension of English Language (since it was felt that he would be attending the English Medium school). Thus the screening device on the whole carried 100 marks.

The details of the scoring was as mentioned below. To begin with children in groups of ten were brought

in. It was a large room where, on one side was spread a long
mat on which were spread manipulative equipments, viz.,
building blocks, peg boards, puzzle trays, strings and beads.
There were three sets in each, so that children have enough
material and also enough choice. The children were directed
to choose anything to play. As they engaged themselves with
the equipment each one was scored on the basis of his ability
to manipulate the material. The beads, and pegboards had 5
scores each and the blocks and puzzles which is at a higher
level and needs more skill for manipulation had 10 scores
allotted. As a child manipulated, the following elements
were observed:-

   (i)   His eye-hand control

   (ii) Motor control

   (iii) Ability to perform that task (i.e. to string the
         bead, to fit the peg in the hole of the peg board)

   (iv) Ability to complete that task

   (v)   Swiftness

They carried one score each in the case of
beading and pegboards and 2 each in blocks and puzzles. As a
child completed a task as, for example, stringing the bead,
another equipment was presented to him, say blocks, and was
asked whether he would like to play with it and, thus, each
child was drawn to all the four equipments to manipulate.

There were 10 beads to be strung, 6 coloured pegs to be fitted in the pegboards, 12 blocks with which he could construct anything and large puzzle trays with 4 pictures each. The puzzle was not a cut-out puzzle (i.e. the same picture cut-out into three or four pieces to be assembled together) since the child at this age would not be able to assemble it, but one full picture cut-out as, for example, the fruit puzzle tray. The cut-outs in complete pictures of apple, mango, pineapple and banana were there. Similarly, there were two puzzle trays of vehicles, a bus, a car, a plane and a ship which are familiar to the children.

If the child completed all the tasks he was given full marks i.e. 5 for the beading, 5 for peg boards, 10 for the blocks and 10 for the puzzle. There were no restrictions as to how he should do – whether he arranges the blocks sideways and calls it a train or builds a tower by keeping them one over the other, the child was given constant signals of approval by nodding the head or smiling. There was no time limit too i.e. no child was pressurised to do or complete it within a given time, but if it was found that the child was not making any progress in it, he was skillfully drawn to the next one by asking him – "Would you like to play with this now?".

As he was engaged in the activities with manipulative equipments, observations were made on his

psychosocial traits. These were classified under 5 categories with 3 sub categories and they were all arranged hierarchically in the descending order and the scores too were arranged from 6 to 1 thus

Social Competence	Emotional Maturity	Emotional Stability	Ability to establish relationships	Behaviour At Activities
1. Friendly & co-op-erative	Willing to leave parents	Happy & secure	Interacted freely	Enthusias-tic & Eager
2. Timid & shy	Persuaded by Parents	Occasiona-lly anxious	Interacted occasionally	Actively involved
3. Scared	Persuaded by Parents and Teachers	Often An-xious	Independent and aloof	Did when told

The first was scored 6 - 5, the second was scored 4 - 3, the third was scored 2 - 1.

As the activities were completed and the observation noted on the physical/Motor Skills and psychosocial skills the screening came to the 3rd area i.e. the cognitive skills. This comprised of 5 items, thus:-

1. Picture Recognition   Total

   Naming 4 pictures   two scores each   8

2. Naming of Articles

   Name 2 articles   two scores each   4

3. <u>Repeat After Me</u>

    Repeat 2 sentences   two scores each   4

4. <u>Following Instructions</u>

    Follow 2 instructions   Four scores each   8

5. <u>Speech Clarity</u>   three point scale   6 - 1

To begin with, the child was drawn to picture books and was asked to name 4 different pictures. Each naming carried 2 scores and the child was then asked to name the articles. Naming of different articles too carried 2 scores each. After this, statements were made like "I like to play", "I want a ball" and the child was asked to repeat the sentences. This was the item "Repeat After Me". Each sentence repeated accurately had 2 scores. If repeated half (missing one word etc.) he got 1 score and if repeated just the last word 1/2 score. The next item in the cognitive skill area was following instruction. Instructions were given one after another and the child was expected to follow it for e.g. a pen, pencil, book, etc. were kept on the table close near to the child and the child was asked to "Give me the pencil" and so on. How clear was the child's speech was noted on a three point scale.

The scores on Comprehension of English Language were as follows:

The child was asked questions in English and he   10 - 9
 answered in English

The child was asked questions in English and he   8 - 7

answered in monosyllables

The child was asked questions in English and he   6 - 5

answered in Hindi

The child was asked questions in Hindi and he   4 - 3

answered in Hindi

The child was asked questions in Hindi and he   2 - 1

could not respond well

PILOT STUDY. The screening device in the final form (Appendix

5) after the content validity and item analysis, was

administered on 425 children who sought admission to the

school in 1986-87. Of these 344 children took admission and

the reliability was computed.

RELIABILITY:

A screening measurement must yield consistent results. If

contradictory results are obtained for a child when the same

test is administered on different occasions, the information

is meaningless as a basis for making decisions. Ofcourse,

measurement of a child's developmental functioning will not

be consistent as the measurement of height and weight, still

a good screening procedure is one that is reliable enough to

consistently yield results with a relatively narrow range.

The   utility   of   any   psychological   test   is determined by its validity and reliability. Guilford (1981) and Garrett (1973) emphasize the need to use valid and reliable tools for measuring any criteria.

Since   no parallel form of the   tool   was available, the method of establishing reliability by the parallel form method could not be sought for. The split half method also could not be employed for the simple reason that all the items could not be divided into equal halves.   Inter item consistency was also not feasible.

So the test retest reliability was considered to be the most suited and was used. This involves a comparison between results obtained on different occasions (i.e. at the 1st instance and repeated after some gap) by administering the same test.

The screening device was administered in Feb 1986 to the sample of 544 children who were admitted for the following academic year and the responses were scored.   In June '86, when they joined school, the second administration was done after an interval of 15 weeks. This long interval could not be helped since the children were not available. The retest was conducted exactly in a similar fashion by getting 10 children at a time to engage in activities and observing and screening them on various aspects.

development is determined by their learning at home. This is not to overlook the importance of heredity, particularly in relation to physical growth and also intellectual development, nor to deny the influence of wider environment of neighbourhood and the community. For the young child, however, the home and the family play the major part in drawing out, structuring his abilities moulding his personality and behaviour giving directions to his interest and shaping his attitudes.

Hence, it was important to embark upon interviewing parents which would give a complete picture of the child - how ready he was scholastically, what were the impediments in his home, what obstacles would come in the way of his progress and so on.

The researcher did not come across any suitable questionnaire or schedule and so a new framework of items was prepared from their point of view.

Pre-Study: A pre-study was conducted by interviewing parents of the 308 children admitted in the pre-school section of the school. It was by way of discussion on the following aspects and was semi-structured interview to probe into the Home Background:

(a) How do you spend Sundays and holidays?

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Pre-Study: A pre-study was conducted by interviewing parents of the 308 children admitted in the pre-school section of the school. It was by way of discussion on the following aspects and was semi-structured interview to probe into the Home Background:

(a) How do you spend Sundays and holidays?

(b)　　Who takes care of the child at home?

(c)　　Are you a member of any club?

(d)　　What papers and magazines do you read?

(e)　　What is your opinion about toys?

(f)　　What is your opinion about books?

(g)　　What is your opinion about play?

(h)　　Who would help the child?

(i)　　What is the role of the school?

(j)　　Should toys be bought?

It was decided to probe into the details of Home Background further since there seemed to be a strong relation between Home Background and Scholastic Readiness of children. The various areas in the Home Background were enlisted.

Selection of Areas

Home Background is such a multidimensional phenomenon that it was a difficult task to select items which would comprise Home Background in totality and yet be precise and specific. It is generally reported that Home Background affects an individual's development, adjustment, personality and is also important in determining scholastic Readiness. The main purpose of interview schedule was to identify factors that were specific in contributing to the child's readiness, to determine the role it played and to compare the home background of high scorers and low scorers in scholastic

readiness screening device.

At first, a draft was prepared with 10 areas, each of which consisted of 10 questions. These areas were chosen on the basis of norms listed by various experts as important aspects and in consultation with personnel working in the field of early childhood education. Since it was suggested that the prepared schedule would take long time to fill up, it was pruned to a shorter form with all the areas in mind. This would also avoid the boredom and monotony which may set in when questioned for too long.

This schedule thus pruned was administered to 12 mothers and items which were difficult to be understood or too open ended, were modified. The final schedule (Appendix 6) had 6 categories, 5 of which had 10 items each and the sixth had 5 items. The categories are as under:

1.   Attitude to child rearing

2.   Actual handling

3.   InterPersonal relations

4.   Parental expectations

5.   Facilities provided and

6.   Preparation of the child

Rationale for Selection of Areas:

Attitude to child rearing was included, since the views and beliefs of parents determine to a large extent, the progress of the child. Scholastic Readiness of children depends not only on their abilities, but also on the attitudes within the family and the school. Lack of favourable attitudes lead to negative feelings which, in turn, affect the Scholastic Readiness.

Some researchers emphasize the view that factors like educational environment at home and attitudes of parents are more consistent predictors of achievement. But all these factors are mutually overlapping and inter-dependent. According to Parker (1967) educational disadvantage is not simply dependent upon social status, but represents the whole syndrome of family characteristics of which most important are Parents' attitude. While concluding the Plowdeu report, Wiseman (1967) stated, "of home environmental variables, those denoting family attitude to education, ambition and literacy are a great deal more important than those denoting material circumstances and social class".

Actual handling was included since it would indicate the exact way in which the child is brought up and obviously it may differ from the attitudes. Opportunities provided to the child to be self-reliant, encouragement given

to be on his own and be independent, are important aspects in child-rearing.

Interpersonal relations go hand-in-glove in understanding the child. The importance of close parent child relationship and interactions cannot be underestimated. It has been proved beyond doubt that interpersonal relations within the family contributed substantially to the child's adjustments and his personality formation.[1] Erikson has emphasized the early parent-child experiences as the determining factor in the child s later adjustment. Mussen Conger and Kagan (1969) have described how unfavourable parent-child relation can cripple the child's chances to adjust successfully to the school situation.

Parental expectations determine to a great extent what the child will achieve, to what extent he will develop, what heights he will attain. Parental aspirations and expectations of their children have been found to be strongly related to the achievement and attainment. High expectations provided impetus towards higher attainment.

Facilities provided have always been thought to be closely associated with the child's accomplishment,

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1 Kuppuswamy, B. : Child Behaviour and Development. New Delhi. Vikas Publishing House, 1980. pp 260-263

particularly in the scholastic field. The physical features like availability of books, furniture, place and similar other things are part of socio-economic status. These are considered as facilitators to development and progress and it was important to include this aspect to find out, how closely it related to high and low scorers in Scholastic Readiness device.

Preparation of the child, the last variable, included in Interview Schedule, was also thought to be one which indicates whether the Scholastic Readiness of the child was nurtured or left to develop on its own. It was imperative to establish the fact whether any kind of support or help rendered to the child facilitates his readiness.

SCORING: A three point scale has been provided for scoring Agree, Somewhat Agree, Do not Agree were the three alternative answers. The highest a parent could score in an item was 3 and the lowest was 1. The statements were jumbled up so that in scores if one Agrees he scores 3 and in some others if he Does not agree she scores 3. In each of the variable, a parent could score maximum of 30 and minimum of 10 scores. On the whole the entire interview schedule carried 180 scores. Manual scoring was done of all the variables with the help of one assistant. After completing the scoring, the score tables and data-sheet were prepared.

Rating . Scale: Grading personal characteristics. The rating scale is a format prepared in the school which has different aspects to be noted by the teachers under four major areas as follows:

1. Personal Data

2. Mental Abilities

3. Social Skills

4. Personality Traits

The various aspects under each of these areas are as follows:

Personal Data	Mental Abilities	Social Skills	Personality Traits
Physical Development	Observation	Leadership qualities	Cheerful
Height cms.	Curiosity	Mixes freely	Poised
Weight Kg	Memory	Speaks freely	Confident
General Health	Receptivity	Co-operative	Self-Reliant
Cleanliness	Retention	Non-Co-operative	Generous
Discipline	Recall		Self-centered

The teachers fill them four times a year in August, October, January and March while entering the marks obtained by children in the different tests. The rating scale (Appendix 7) was however, filled up on the basis of the observation made by the teachers during the classroom

interaction. S.I.E.S. School is an institution which follows the progressive method i.e. the play way method and most of the activities are conducted with a variety of equipments. Hence there is ample scope for teachers to observe the children during free play sessions, during outdoor activities, at the jungle gym, at the slide, with the tricycles and the scooters and so on.

There are special equipments of balance board, etc., where the teacher can observe and strengthen the child's gross motor skills and fine motor skills. There are also activities conducted in drawing, painting, craft work, clay work which include a lot of interaction among teachers and children.

Hence. all these activities provide ample opportunities to teachers for observing children in the specific areas and rating them down precisely.

These were collected for the study which may help in comparing children on the basis of scores obtained by them in the scholastic Readiness screening device and the scores obtained in the rating scale. The rating was done by grading the children thus:

A+ — Excellent

A — V.Good

B+ -- Good

B -- Satisfactory

C -- Fair

D - Below Average

Admission Form The Form of application for admission to Kinder Garten used by the school authority for admission (Appendix 8) was taken up by the researcher as one tool for data collection. It contained all the basic details of a child and his background. It was worded in English and was to be filled up in English only. The bottom strip was left for official use to note down the official details. The form had headings with several sub-headings under many. The information thus filled up by the parents prior to admission is maintained in basic files by the school authorities.

Progress Report Card:-

Data was also collected from the progress report card (Appendix 9). A report of the progress made by the child in the academic field were maintained by the teachers in the school. The children were evaluated under three main categories:

1. Language

2. Number Work

3. General Knowledge

The school had a unit test in the month of August, a first semester exam in the month of October a second Unit Test in January and the second semester in the month of March. Each of these category were further subdivided and the child was evaluated. This report card was used by the researcher to correlate the scores obtained by the children in the Scholastic Readiness screening Device with those of the scores obtained in Academic performance. This was done four times in September after the unit test, in November after the first semester examination, and in February and April after the second Unit Test and Semester examination. Correlation was also obtained of the scores on the whole in academic performance.

DATA COLLECTION

Administration Of Screening Device:

During visits to school, the researcher had observed that when children are taken individually to a room, it causes a lot of anxiety and it is a traumatic experience for children when they are separated from their parents. Children were not relaxed and comfortable, but were crying, unwilling or quiet and non-co-operative. Hence, the foremost point in mind while planning the administration procedure was that children would be brought in groups and not individually which would minimise their anxiety considerably. It was also

planned that they would not be brought straight away for screening but for activities with equipments which would give them the feeling of play rather than any formal activity.

Needless to say, in any activity for young children, considerable care must be taken to make the children comfortable secure and encourage them to produce maximum performance.

Utmost care was taken while planning the administration procedure to ensure that it is absolutely conducive for the young children who are averse to strangers, who will be unco operative and who will not be willing to leave the parents. Every effort was made to establish a working rapport and avoid arousing any anxiety in the children. Screening was done only when the child was in good physical and emotional condition. Care was also taken to carry out screening in a secluded, quiet place, free from disturbances and distractions. The screening device was as simple as possible, which could be used by teachers later as a regular screening-evaluation programme.

Few materials were needed — some equipment, toys, picture books and screening sheets. The screening programme was not timed since children were expected to perform at their level but on an average most children took

about 15 - 20 minutes. It was observed that on an average in an hour four to five children could be screened comfortably on all the items.

•   Verbal type of responses required 4 to 5 minutes. The children could be kept busy easily with performance items. Simultaneously, observations of Psycho/Social characteristics and motor skills were rated down.

The administration of the screening device was so planned and organised that all these aspects were taken care of diligently.

To begin with, children were brought in groups of ten. Those who were unwilling to leave the parents were allowed to enter with the parents, who sat in a corner. (There were columns to score all these aspects). The arrangement was made in a big room where on one side was a large mat spread with lots of manipulative equipments viz., building blocks, peg boards, puzzle trays and strings and beads. There were three sets in each so that children have enough material and also enough choice. The children were directed to choose any equipment to play. There was no problem to draw the children into these activities since children have always enjoyed building blocks and playing with beads and peg boards. This opened limitless possibilities

for the researcher to observe and note the child s psycho/social skills. It called for least anxiety for the child and he felt as though he was merely playing. Also, no one was engaged in it alone. There were 10 children at a time and this, in fact, encouraged him to engage himself in the activity, comfortably. And, on the other side, arrangements were made to interview and screen the children.

As the children were busy with the equipments and observations were made, equipments were given for specific activities. As a child completed a task (i.e. stringing the beads, for example) other equipment was presented to him, say, blocks and was asked whether he would like to play with it, and thus each child was drawn to all the four equipments to manipulate. During activities no comments were made about the product that he was making. He was never given a feeling of making a mistake or giving wrong responses. No judgement was passed.

Three personnel were needed at a time, one to engage children in activities, one to observe and one to interview the child. The teachers who were taken up for this purpose were trained and highly qualified and experienced. They were briefed and a systematic orientation programme was held. Since the teachers were trained it was easy for them to establish rapport with children and parents, and handle
the   .   The new structure of screening.

of play and observation permitted a rapport to be established
and reduced considerably the anxiety in the tiny tots.

Administration of Interview Schedule The data were collected
by the researcher personally by interviewing the parents.
Parents were given appointments between 10.00 am and 5.00 pm,
spread over a period of 3 weeks. There were three assistants
to help, to check whether the parent has come at the
stipulated date and time (since many walked in according to
their convenience). Tallying of the parents with their
child's admission forms was essential to match each child's
scores on scholastic Readiness with scores obtained by
parents in the interview. These assistants who helped in the
interview were personnels involved in the pre-school field
and hence were familiar with organising and conducting
parent-contacts and so on. They were however, briefed
thoroughly with the procedure involved and the norms to be
adhered to. Creation of good rapport, listening patiently
and noting continuously all the relevant information was
emphasized. There was one assistant writing down all the
discussion, holding the pad on her lap beside the table so
that the parent did not feel conscious of speaking out
frankly.

           Physical environment was carefully planned and
arranged ... comfortable chairs and tables, well lit,
ventilated, breezy and airy room with complete privacy and

devoid of distraction were the highlights of the physical environment. Water facilities were arranged and care was also taken to make arrangements for young toddlers who accompanied their mothers. Picture books were kept beside the mother on low tables and chairs so that the toddlers let the mothers discuss freely and frankly. The timing was so planned that the pre-schooler was in the school and the parents attended the interviews in the adjacent wing. Each interview took about 30 minutes excepting a few which went beyond 40 minutes. These were of the parents who discussed some issues on their own and needed a patient hearing. A few started suggesting reforms and improvements for the school in particular and some went about discussing problems of children in general.

Before the interview, the objectives/purpose were explained to the parent in simple language. Assurance was given that all the information would be kept confidential. The respondent was convinced that his/her sincere response would be an important contribution. They were also told that all other parents were co-operating in the research, and the respondent was not the only one revealing the facts about family. They were also assured that this would, in no way, affect the child's promotions, handled by the teacher.

Interview first began with general discussion

for a minute or two to establish rapport. Questions like how
did they come to school or what arrangements were made at
home, were put forth. This made the mothers especially,
absolutely comfortable and put them at ease. The fathers
also discussed about taking leave or making alternate
arrangement at the work place. Apart from putting them at
ease, this also strengthened their conviction of the
researcher being concerned about their problems genuinely.

Since the parents belonged to different socio-
economic background and different levels of education, the
interview had to be conducted in many instances in Hindi,
Marathi and Tamil. A handful of mothers could not manage
even with Hindi, since they had recently migrated from
Gujarat and Karnataka and hence needed the interview in
Gujarathi or Kannada. The assistants could converse in these
languages and hence, there was no difficulty in interviewing
them.

RATING SCALE (For Data Collection)

The rating scale was used to collect detailed
information on children. The rating scale is a format
prepared in the school which has different aspects under four
major areas as follows:

1.   Personal Data

2.   Mental Abilities

3.   Social Skills

4.   Personality Traits

The various aspects under each of these areas are as follows:-

Personal Data	Mental Abilities	Social Skills	Personality Traits
Physical Development	Observation	Leadership Qualities	Cheerful
Height cms.	Curiosity	Mixes freely	Moody
Weight Kg.	Memory	Speaks freely	Poised
General Health	Receptivity	Co-operative	Restless
Cleanliness	Retention	Non Co-operative	Confident
Discipline	Recall		Hesitant
			Self-reliant
			Dependent
			Generous
			Self-centered

The teachers were supposed to fill them four times a year in August, October, January and March, while entering the marks obtained by children in the different tests. The rating scale was however, filled-up on the basis of the observations made by the teachers during the classroom interaction. Since the school follows the progressive method i.e. the play way method and most of the activities are conducted with variety of equipments, there was no dearth of

scope for teachers to observe the children during free play sessions, during outdoor activities at the jungle gym, at the slide, with the tricycles and the scooters and so on. There are special equipments of balance boards etc., where the teacher can observe, strengthen the child's gross motor skills and fine motor skills. Also, there are other activities conducted - Drawing, Painting, craft work, claywork which include a lot of interaction between teachers and children.

All these activities provided ample opportunities to teachers for observing children in the specific areas and rating them precisely.

These were collected for the study which may help in comparing children on the basis of scores obtained by them in the Scholastic Readiness screening device and the scores obtained in the rating scale. The rating was done by grading the children thus:

A+   -   Excellent

A   -   Very Good

B+   -   Good

B   -   Satisfactory

C   -   Fair

D   -   Below Average

These were turned into scores from 5 to 0 since it would be possible to quantify it.

Personal Data and Social Skills had four aspects each to be observed and hence had 20 scores each at a time. Mental Abilities and Personality traits had six aspects to be observed and hence had 30 scores each at a time. Since all these were scored 4 times by the teachers the researcher could gather in all 80 scores each for Personal Data and Social Skills and 120 scores each for Mental Abilities and Personality traits.

Admission Forms

Admission forms were used to collect data regarding the background details. The admission form (Appendix 8) included all the relevant information necessary, and has 17 columns. Of these, the following 7 columns were considered up since it was thought they would be important factors which could influence the child's readiness. They are:-

1.   Educational Qualification of Father

2.   Educational Qualification of Mother

3.   Occupation of Father

4.   Occupation of Mother

5.   Family Income

6.   Number of Siblings

7.   Residential Area

The following particulars were not taken up since they were thought to be not relevant:

1. Name of the pupil in full

2. Father's Name

3. Place of Birth

4. Health and vaccination

5. Native Place

6. Siblings Schooling

The following particulars were not taken up since it may be difficult to draw conclusion or comparison or correlation. They were:

1. Religion

2. Mother Tongue

3. Place of Birth

The necessary information was first taken up on a separate format matching them with Scholastic Readiness of children. This was then coded which gave a picture at a glance. On the basis of the scores obtained in Scholastic Readiness (Screening Device), children were divided into three groups: The High Scorers, Moderate Scorers and Low Scorers and comparisons and correlations were worked out. The educational qualifications of the mother and father were scored under 5 categories - schooling, S.S.C., Undergraduate, Graduate and Post-graduate or Professional Qualifications.

The family income was categorised under four headings upto 1000, 1001 to 2000, 2001 to 3000, 3000 and above, occupation of father and mother were categorised into various headings.

Progress Report Card:

A report of the progress made by the child in the field were maintained by the teachers in the school. The children were evaluated under three main categories:

I.   Language
II.   Number Work
III. General Knowledge

The school had a Unit Test in the month of August, first semester exam in the month of October, second unit test in January and the second semester in the month of March. The marks obtained by the children in each of these tests and as a whole were taken up. The sub-categories i.e. Language, Number Work and General Knowledge were also considered both on the whole and at every test. These marks were used by the researcher to correlate with the scores obtained by the children in Scholastic Readiness Screening Device. This was done 4 times in the month of September after the first unit test, in the month of November after the first semester, in the month of January after the second unit test and in the month of April after the second semester.

Correlation was also obtained of the scores on the whole in academic performance.

Analyses of Data

Depending upon the purpose, different statistical techniques were applied to the data at different stages of investigation. These may be classified into

a) Those used to obtain general description of data on various variables.

b) Those which were employed for the testing of the hypotheses.

The particulars of the statistical techniques employed for different purposes are indicated below :-

For description of the data :-

1. Measures of Central Tendency - Mean, Medium, Mode.

2. a. Frequency polygons representing the original & smoothed frequencies.

   b. Comparison of frequency distribution between different categories.

3. S.D., Skewness & Kurtosis of the distributions along with the S.E. of the Mean, SD & fiduciary limits.

I   For testing the hypotheses

1.   Product moment correlation technique for those hypotheses indicating relationships.

$$r = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{[N\Sigma X^2 - (\Sigma X)^2]\ [N\Sigma X^2 - (\Sigma Y)^2]}}$$

The significance of r is determined in terms of the critical values of r for the degrees of freedom.

2. Analysis of variance or ANOVA to test the null hypotheses of differences among more than two categories.

$$F = \frac{\text{Among mean variance}}{\text{Within group variance}}$$

The significance of F is determined by comparison with the critical values for the degrees of freedom in table F.

3.   Critical ratio technique or 't'-test to test the differences between two categories.

$$t = \frac{/M_1 - M_2/}{SED}$$

where $SED = \sqrt{\dfrac{\sigma_1^{\ 2}}{N_1} + \dfrac{\sigma_2^{\ 2}}{N_2}}$

The significance of 't' is determined in terms of critical

values of t for the respective degrees of freedom from table

D.

CHAPTER IV

DESCRIPTIVE ANALYSIS

Data collected through various tools often have little meaning or significance until they have been re-arranged or classified in a systematic way.

The data may be adequate, valid and reliable to any extent but does not serve any worthwhile purpose unless carefully edited, systematically classified and tabulated, scientifically analysed, intelligently interpreted and rationally concluded.

According to Wolfe, "The discovery of order in the phenomena of nature, notwithstanding their complexity and apparent confusion is rendered possible by the process of analysis and synthesis which are the foundation of all scientific methods".[1]

The mass of data collected through the use of various reliable and valid tools was raw. It was systematized and organised, i.e. edited, classified and

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1. Sidhu. S.K.: " Methodology of Research in Education", New Delhi, Sterling Publishers Pvt. Ltd., 1985. pp. 274-275

tabulated before it could serve any worthwhile purpose.

The purpose of the present study is to investigate into the S.R. of PSC. The data collected have been analysed and interpreted applying various statistical techniques. In the present chapter descriptive analysis of the data has been dealt with. Measures of central tendency, measures of variability and other parameters, along with frequency polygons, Bar-diagrams and phi-diagrams whenever necessary have been presented of the data collected.

Descriptive analysis is essential, since it helps in establishing the normality of the distribution. An understanding of the characteristics of the frequency distribution[1] is normal in tendency. Thus in this chapter an attempt is made to establish normality and comparison of various distributions. For the present study data were collected from:

1. Children

2. Parents

3. School Records

The data consists of 4 sets of scores. They are:

1. Scholastic Readiness

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[1] distribution represented by the normal curve is necessary since parametric techniques for inferential analysis can only be applied if the distribution is normal.

2. Academic Achievement

3. Personal Abilities

4. Home Environment

Scholastic Readiness consists of:

    Motor Skills

    Cognitive Skills

    Psycho-social skills and

    Comprehension of English language

Academic Achievement consists of

    Language skills

    Number work

    General Knowledge

Each of these at the following tests

    First Unit Test

    First Semester Exam

    Second Unit Test

    Second Semester Exam

Personal abilities consists of:

1. Other activities

    (a) painting

    (b) drawing

    (c) creative work

    (d) clay

    (e) puzzles

2.   Self attributes which includes:

   (a)   Personal data

   (b)   Mental abilities

   (c)   Social skills

   (d)   Personality traits

   (e)   Knowledge of English

Home Environment consists of:

1.   Home background which includes

   (a)   Education of parents

   (b)   Education of mother

   (c)   Education of father

   (d)   Occupation of mother

   (e)   Occupation of father

   (f)   Economic status

   (g)   Number of siblings

   (h)   Residential area

2.   Parental Involvement which includes:

   (a)   Attitude to child rearing

   (b)   Actual handling

   (c)   Inter-personal relationship

   (d)   Expectations of parents

   (e)   Facilities provided

   (f)   Preparation of the child

   (g)   Parental interest

S.R. OF THE TOTAL SAMPLE

TABLE 4.1 (a)

DISTRIBUTION OF S.R. SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	15	12.00
11 - 20	21	29.00
21 - 30	51	33.67
31 - 40	29	44.33
41 - 50	53	48.67
51 - 60	64	46.6.'
61 - 70	23	38.67
71 - 80	29	23.33
81 - 90	18	17.33
91 - 100	5	7.6'
Total	308	

Figure 4.1 represents the original and smoothed frequency polygons of Scholastic Readiness scores for the total sample.

FREQUENCIES

ORIGINAL SCORES

□ ORIGINAL   + SMF
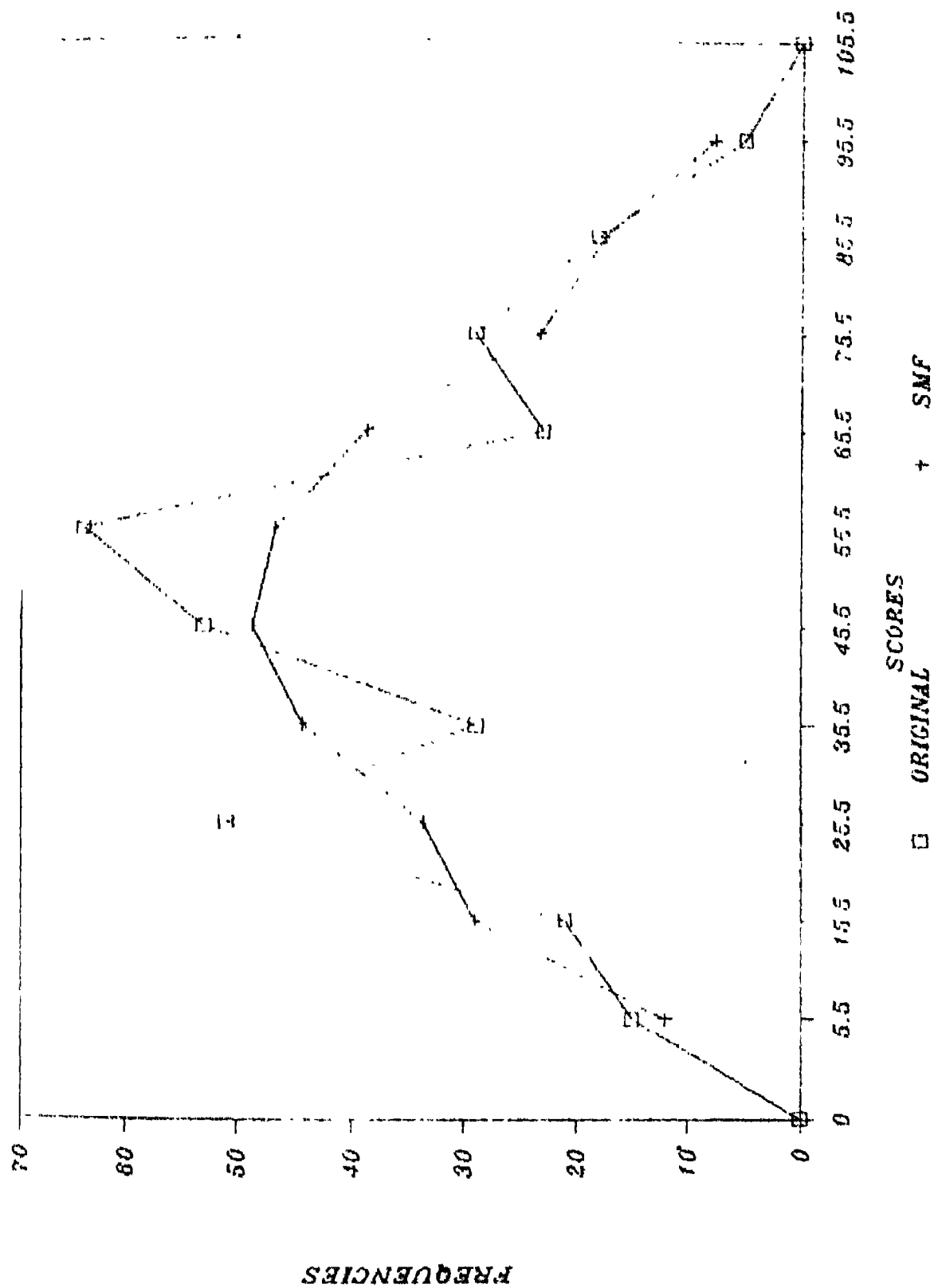
TABLE 4.1 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS
SCORES FOR THE TOTAL SAMPLE.

N	Mean	Median	Mode	SD	SK	kur
308	46.80	47.67	49.41	21.97	-0.119	0.265

The scores of Scholastic Readiness are normally distributed in the total sample. The curve is negatively skewed and it is also platykurtic.

TABLE 4.1. (c)

FIDUCIARY LIMITS OF MEAN AND SD OF SCHOLASTIC READINESS
SCORES FOR THE TOTAL SAMPLE.

Statistic	S.E.	.95	.99
Mean	1.25	44.34 - 49.25	43.56 - 50.02
SD	0.88	20.22 - 23.71	19.67 - 24.26

The .95 and .99 confidence limits for the Mean and SD of Scholastic Readiness scores do not exhibit a wide range. This supports the normality of distribution and also the high degree of significance of the sample statistics.

SCHOLASTIC READINESS AND SEX

TABLE 4.2 (a)

DISTRIBUTION OF SCHOLASTIC READINESS

SCORES OF BOYS AND GIRLS

Scores	Boys %	Girls %
1 - 10	4.52	5.50
11 - 20	7.54	5.50
21 - 30	16.08	17.43
31 - 40	9.05	10.09
41 - 50	16.58	18.35
51 - 60	21.61	19.27
61 - 70	7.04	8.26
71 - 80	9.55	9.17
81 - 90	6.53	4.59
91 - 100	1.51	1.83

Figure 4.2 depicts the distribution of Scholastic Readiness scores for Boys and Girls in the form of frequency polygons. The frequencies are plotted as percentages.

Figure 4.2.

S.P. OF BOYS AND GIRLS

FREQUENCIES (%)

SCORES   = BOYS   + GIRLS
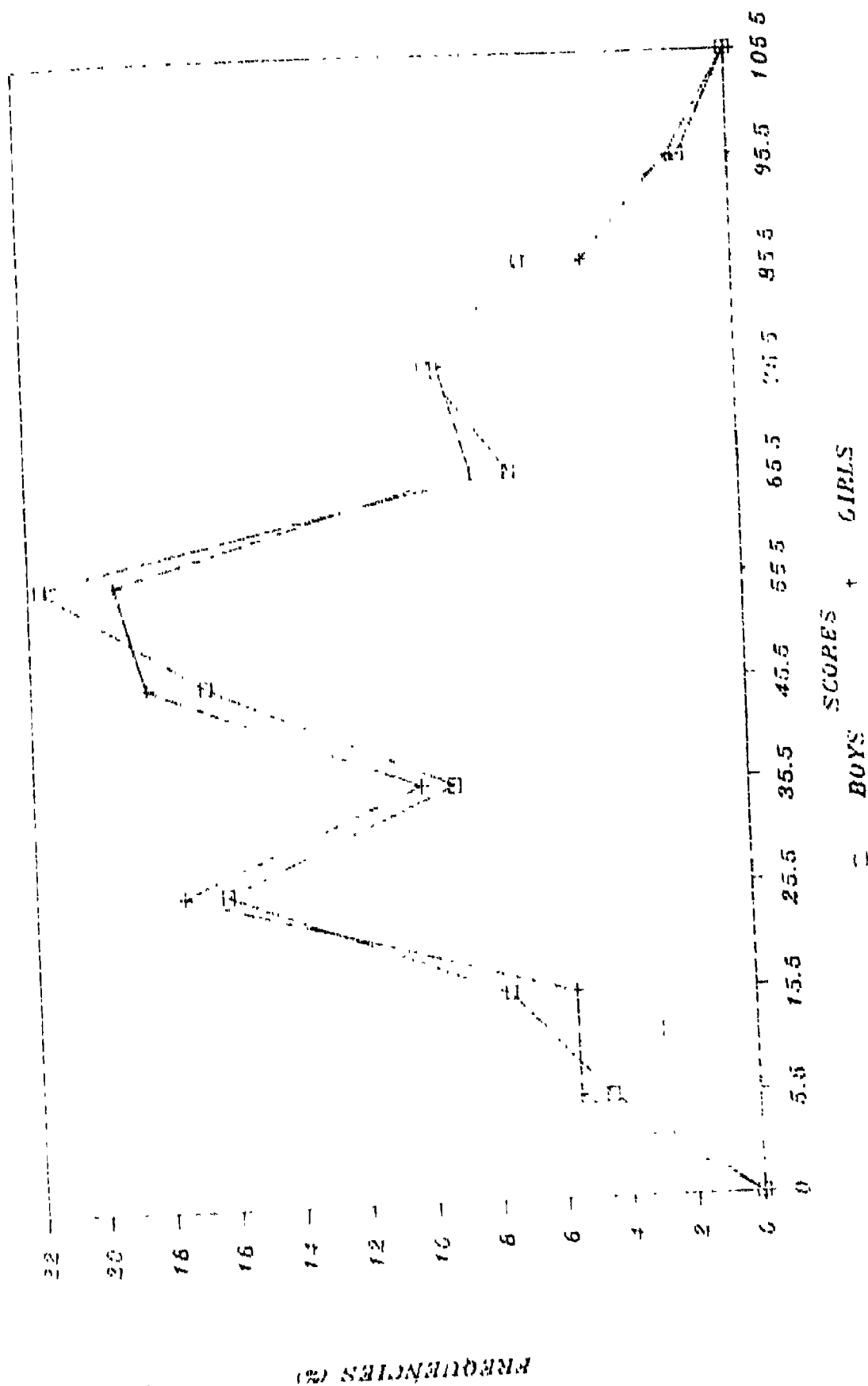
TABLE 4.2 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS
SCORES OF BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	47.10	48.22	50.46	22.11	-0.152	0.261
Girls	46.23	46.75	47.78	21.70	-0.072	0.270

The distribution of Scholastic Readiness scores for the Boys and Girls are normally distributed with a slight variability. The curve of the distributions are negatively skewed, with the kurtosis being leptokurtic for boys and platykurtic for girls.

TABLE 4.2 (c)

FIDUCIARY LIMITS OF MEAN AND SD OF SCHOLASTIC READINESS
SCORES FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	1.56	44.03 - 50.18	43.06 - 51.15
Girls	2.07	42.15 - 50.30	40.87 - 51.59

TABLE 4.2 (c) - Contd.

Group	SE OF SD	.95	.99
Boys	1.11	19.92 - 24.29	19.23 - 24.98
Girls	1.47	18.81 - 24.59	17.89 - 25.51

The .95 and .99 confidence limits for the Means and SDs of Scholastic Readiness scores for Boys and Girls do not have wide ranges, thereby indicating a fairly high degree of significance of the sample statistics.

SCHOLASTIC READINESS AND AGE

TABLE 4.3 (a)

DISTRIBUTION OF S.R. SCORES FOR

THE DIFFERENT AGE GROUPS

Scores	3 - 3.3 yrs. %	3.4 - 3.6 yrs. %	3.7 - 3.9 yrs. %	3.10 - 3.12 yrs %
1 -10	6.12	3.33	5.76	4.61
11 -20	10.20	7.77	6.73	3.07
21 -30	8.16	18.88	16.34	20.00
31 -40	14.28	13.33	5.76	6.15
41 -50	22.46	17.77	13.46	15.38
51 -60	26.53	21.11	20.19	20.00
61 -70	4.08	7.77	8.65	7.69
71 -80	6.12	7.77	11.53	10.76
81 -90	2.04	2.22	8.65	9.23
91-100	0	0	2.88	3.07

Figure 4.3 depicts the distribution of Scholastic Readiness scores for different age groups in the form of frequency polygons. The frequencies are plotted as percentages.

Figure 4.3(a) depicts the same in Bar diagram. Bar diagram of the Mean scores of the different age groups are given in figure 4.3 (b).

S.R. OF DIFFERENT AGE GROUPS

Figure 43.

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S.R. OF DIFFERENT AGE GROUPS
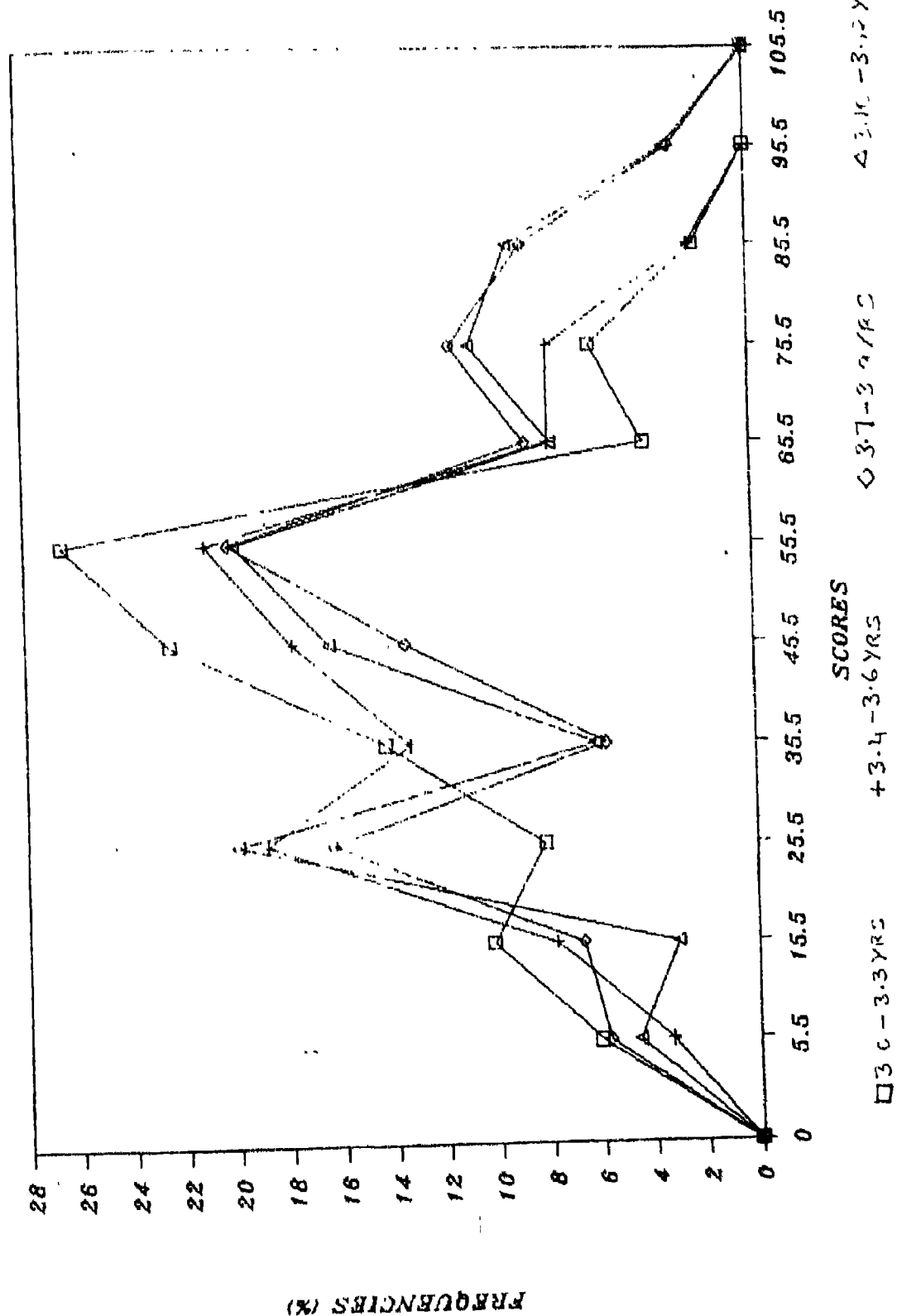
Figure 2.5.

FREQUENCIES (%)

SCORES

3:0-3:3YRS   3-4-3-6YRS   3:7-3:9YRS   3:10-3:12YRS

S.R. OF DIFFERENT AGE GROUPS

Fig 4.3.b

MEAN SCORES

AGE (YEARS)

3-3.3   3.4-3.6   3.7-3.9   3.10-3.12
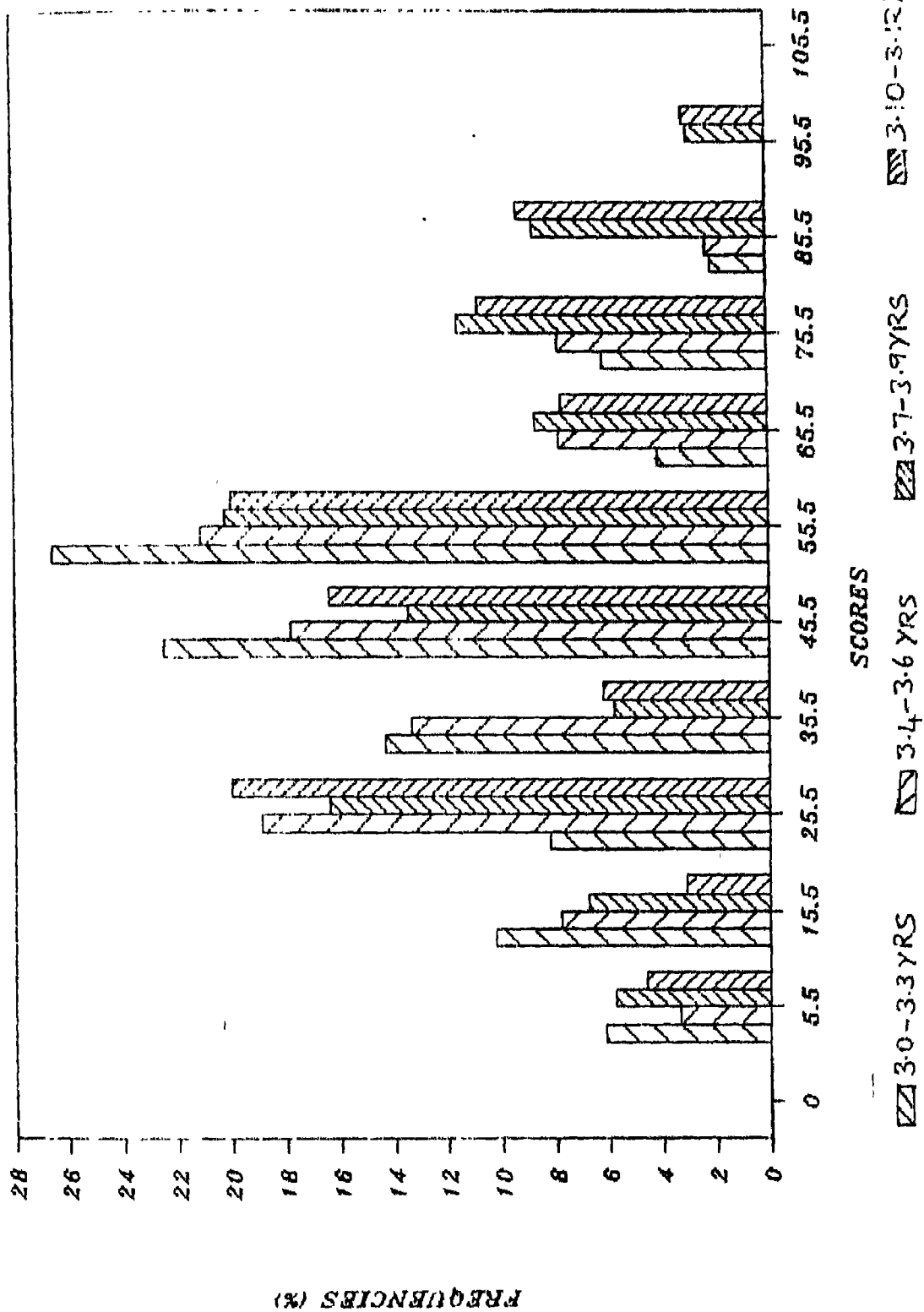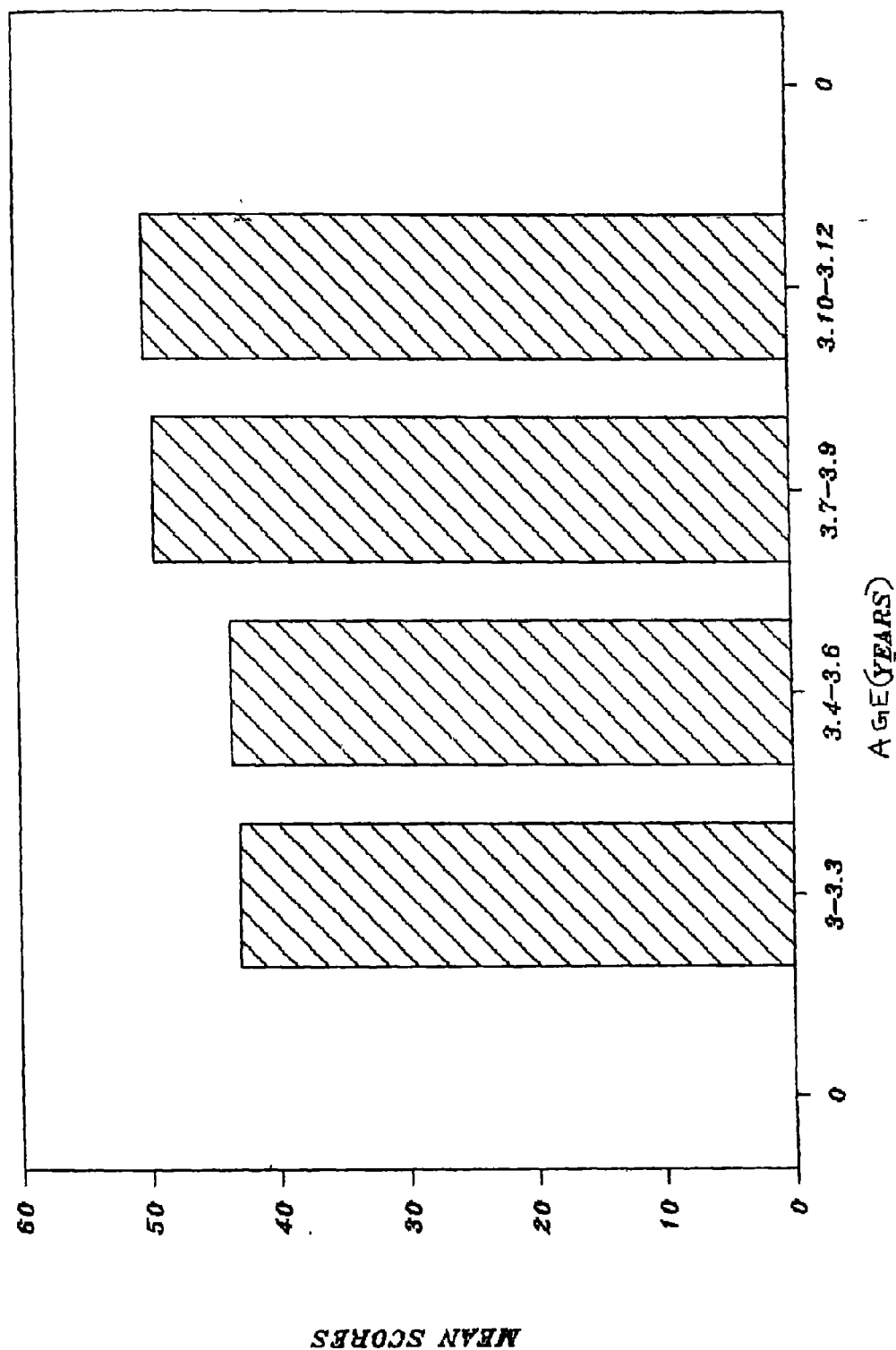
TABLE 4.3 (b)

RELEVANT STATISTICS OF S.R. SCORES

FOR THE DIFFERENT AGE GROUPS

	Group Yrs.	Mean	Median	Mode	SD	SK	Kur
1.	3.00-3.03	43.05	45.5	50.40	19.01	-0.386	0.240
2.	3.04-3.06	43.61	45.25	45.53	19.14	-0.257	0.284
3.	3.07-3.09	49.44	51.45	55.47	24.05	-0.251	0.307
4.	3.10-3.12	50.12	50.88	52.42	23.21	-0.098	0.317

The distributions for all four groups are near normal with the curves negatively skewed. Excepting the 1st group which is leptokurtic all other distributions are platykurtic in nature.

TABLE 4.3 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS SCORES FOR THE DIFFERENT AGE GROUPS

	Group Yrs.	SEM	.95	.99
1.	3.00-3.03	2.72	37.73 - 48.37	36.04 - 50.06
2.	3.04-3.06	2.02	39.66 - 47.57	38.41 - 48.82
3.	3.07-3.09	2.36	44.82 - 54.06	43.36 - 55.52
4.	3.10-3.12	2.88	44.47 - 55.76	42.69 - 57.54

TABLE 4.3 (c) - Contd.

Group Yrs.	SE OF SD	.95	.99
1. 3.00-3.03	1.93	15.23 - 22.79	14.03 - 23.98
2. 3.04-3.06	1.43	16.33 - 21.95	15.45 - 22.84
3. 3.07-3.09	1.67	20.76 - 27.32	19.72 - 28.35
4. 3.10-3.12	2.04	19.20 - 27.22	17.94 - 28.48

The .95 and .99 confidence limits for the Means and SDs of all the groups have relatively narrow ranges. This indicates the significance of the obtained Means and SDs.

MOTOR SKILLS

TABLE 4.4 (a)

DISTRIBUTION OF MOTOR SKILLS SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 5	41	32.33
6 - 10	56	68.67
11 - 15	109	72.00
16 - 20	51	65.67
21 - 25	37	34.00
26 - 30	14	17.00
TOTAL	308	

Figure 4.4 gives the original and smoothed frequency polygons of Motor skills scores for the total sample.

M.S. OF THE TOTAL SAMPLE

Fig. 4.4.

SCORES   □ ORIGINAL   + SMOOTHED

FREQUENCIES
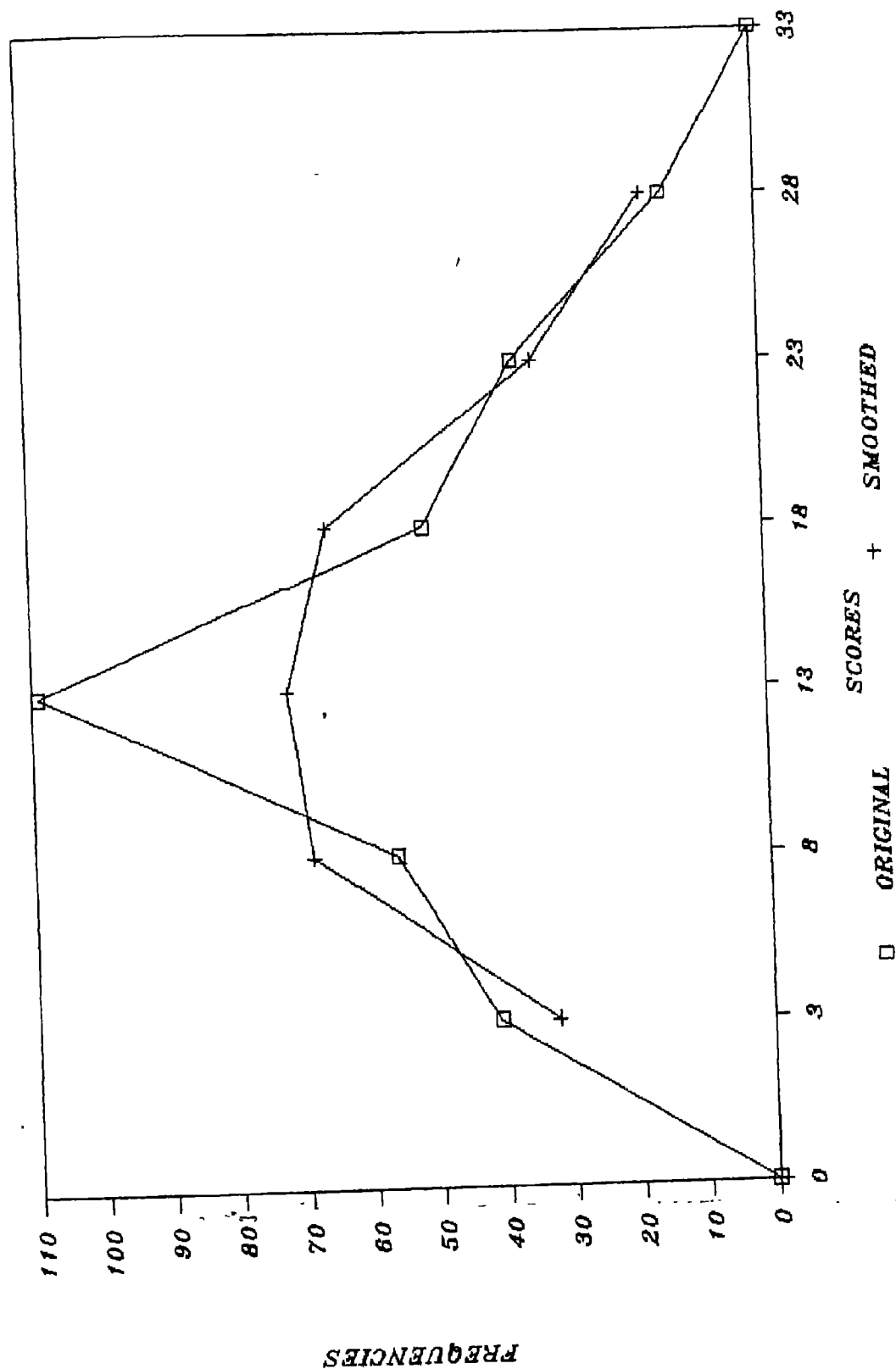
TABLE 4.4.(b)

RELEVANT STATISTICS OF MOTOR SKILLS
SCORES FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	13.47	13.11	12.40	6.63	0.163	0.243

The distribution of Motor Skills scores among the total sample of children is near normal. The skewness of the distribution is positive and the curve is leptokurtic.

TABLE 4.4 (c)

FIDUCIARY LIMITS OF MEAN & SD OF MOTOR SKILLS SCORES
FOR THE TOTAL SAMPLE

Statistics	SE	.95	.99
MEAN	0.37	12.72 - 14.21	12.49 - 14.44
SD	0.26	6.10 - 7.16	5.94 - 7.32

The .95 and .99 confidence limits of the Mean and SD of Motor Skills scores have fairly narrow ranges, indicating that the sample statistics are almost dependable in terms of the degree to which they estimate the population parameters.

MOTOR SKILLS AND SEX

TABLE 4.5 (a)

DISTRIBUTION OF MOTOR SKILLS SCORES

OF BOYS AND GIRLS

Scores	Boys %	Girls %
1 - 5	13.06	13.76
6 - 10	18.59	17.43
11 - 15	34.17	37.61
16 - 20	17.08	15.39
21 - 25	12.06	11.92
26 - 30	5.02	3.66

Figure 4.5 depicts the distribution of Motor Skills scores for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

M.S. OF BOYS AND GIRLS

Fig. 4.5.

FREQUENCIES (%)

SCORES

□ BOYS   +   GIRLS

222
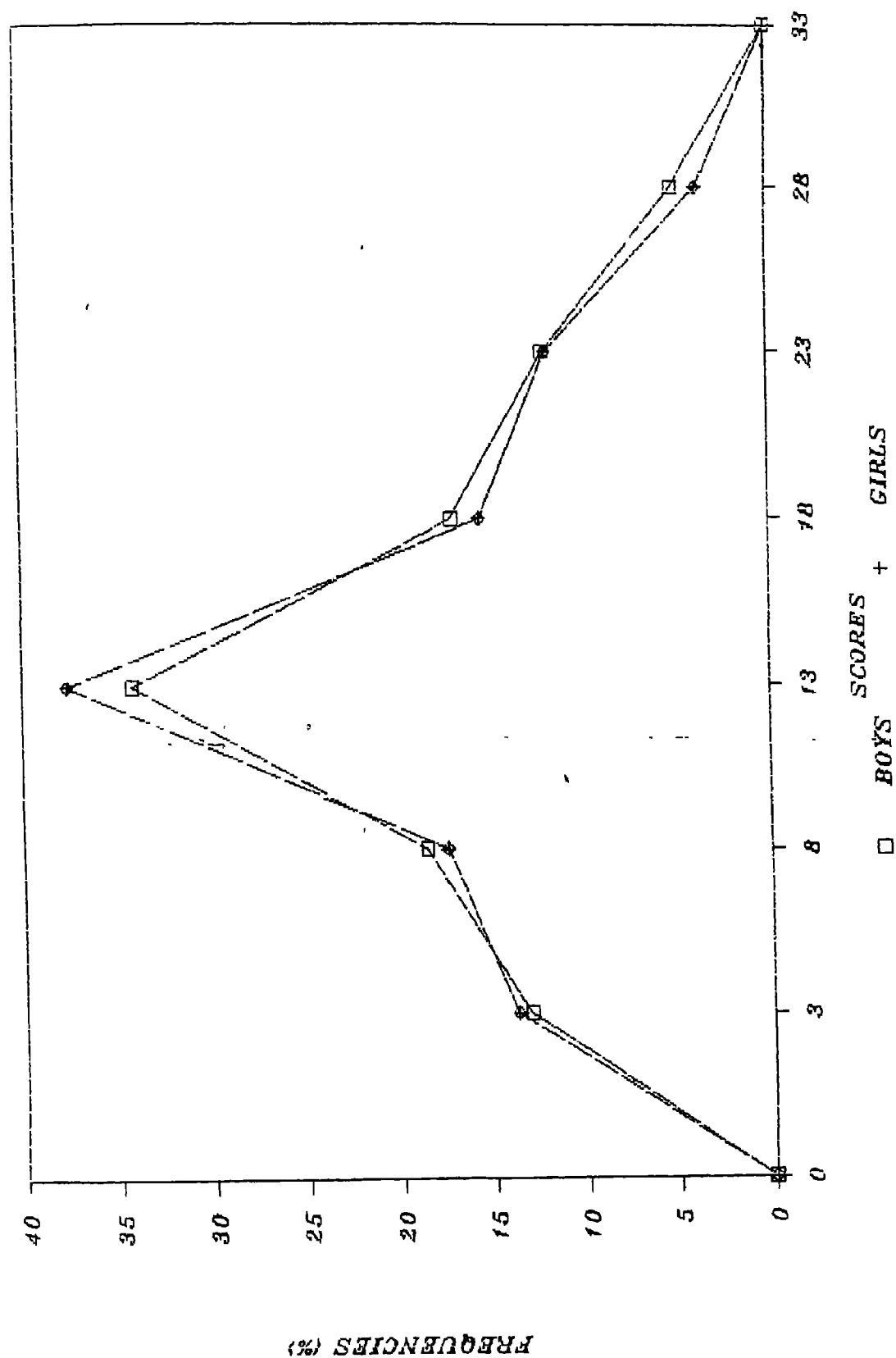
TABLE 4.5 (b)

RELEVANT STATISTICS OF MOTOR SKILLS

SCORES OF BOYS & GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	13.57	13.18	12.39	6.70	0.175	0.247
Girls	13.27	13.00	12.44	6.49	0.125	0.234

The distribution of Motor Skills scores among boys and girls are almost normal. Both the distributions are positively skewed and are leptokurtic.

TABLE 4.5(c)

FIDUCIARY LIMITS OF MEAN & SD OF MOTOR SKILLS SCORES

OF BOYS & GIRLS

Group	SEM	.95	.99
Boys	0.47	12.64 — 14.51	12.35 — 14.80
Girls	0.62	12.05 — 14.49	11.67 — 14.87
	SE of SD		
Boys	0.33	6.04 — 7.37	5.83 — 7.58
Girls	0.44	5.62 — 7.35	5.35 — 7.62

The .95 and .99 confidence limits of the Means and SDs of Motor Skills scores for the boys and girls do not have wide ranges, thereby indicating a fairly high degree of significance of the sample statistics.

MOTOR SKILLS AND AGE

TABLE 4.6 (a)

DISTRIBUTION OF MOTOR SKILLS SCORES

FOR THE DIFFERENT AGE GROUPS

Scores	3 - 3.3 yrs. %	3.4 - 3.6 yrs. %	3.7 - 3.9 yrs. %	3.10 - 3.12 yrs %
1 - 5	24.48	16.66	8.65	7.69
6 -10	14.28	20.00	17.30	20.00
11-15	22.44	35.55	37.50	41.50
16-20	16.32	13.33	20.19	15.38
21-25	18.36	12.22	9.61	10.76
26-30	4.08	2.22	6.73	4.61

Figure 4.6 depicts the distribution of Motor Skills scores for different age groups in the form of frequency polygons. The frequencies are plotted as percentages. Fig. 4.6(a) depicts the same in Bar Diagram. Bar Diagram of the Mean MS scores of the age groups are given in Fig. 4.6(b).

M.S. OF DIFFERENT AGE GROUPS   *Fig.4·6·*

□3·0 – 3·3YRS   +3·4 – 3·6YRS   ◇3·7 – 3·9YRS   △3·10 – 3·12YRS

SCORES

FREQUENCIES (%)
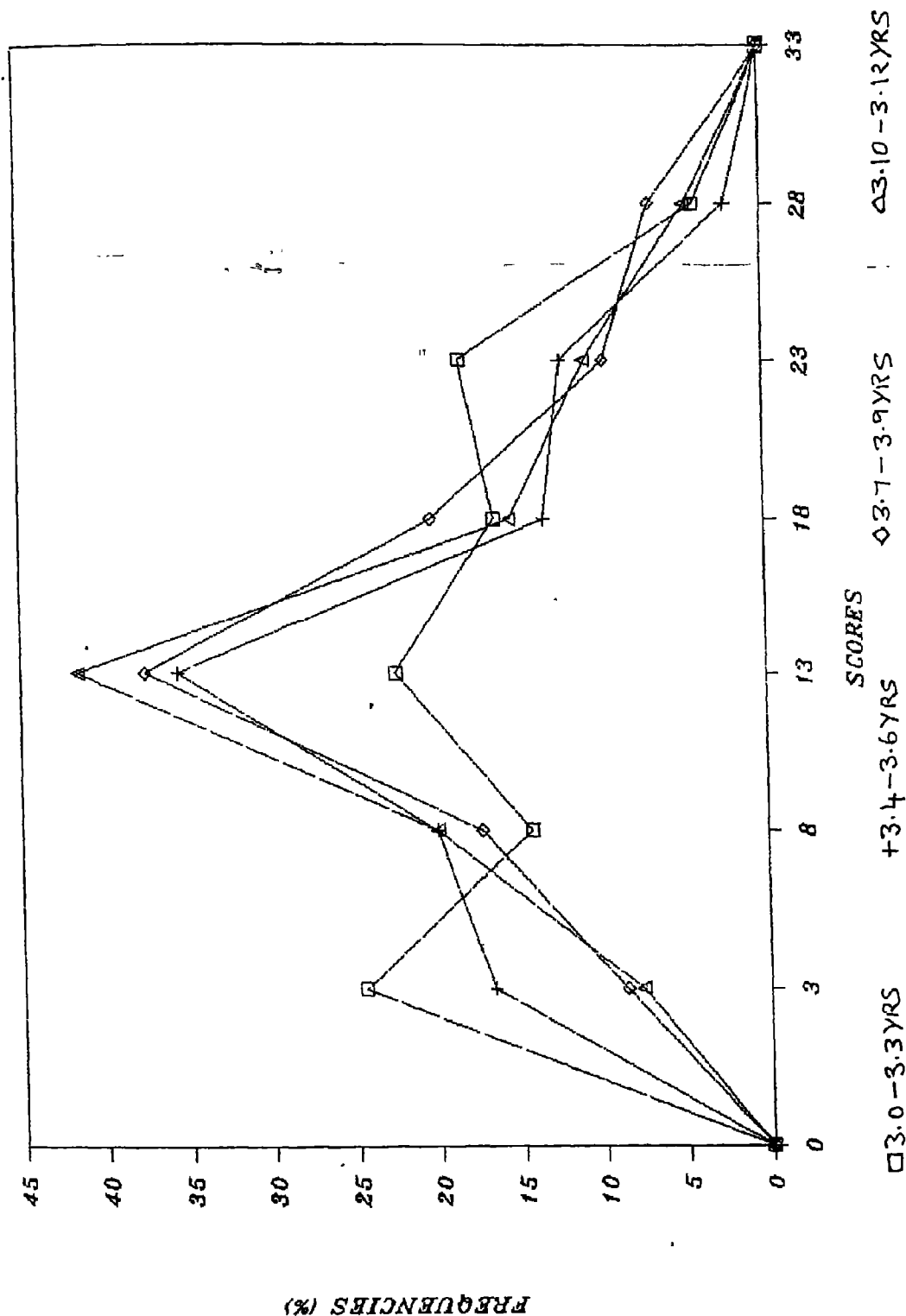
Fig 4.6.a.

M.S. AND AGE DIFFERENCES

Fig 4.6.b

M.S. OF DIFFERENT AGE GROUPS

MEAN SCORES

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

3-3.33   3.4-3.6   3.7-3.9   3.10-3.12

AGE (YRS)
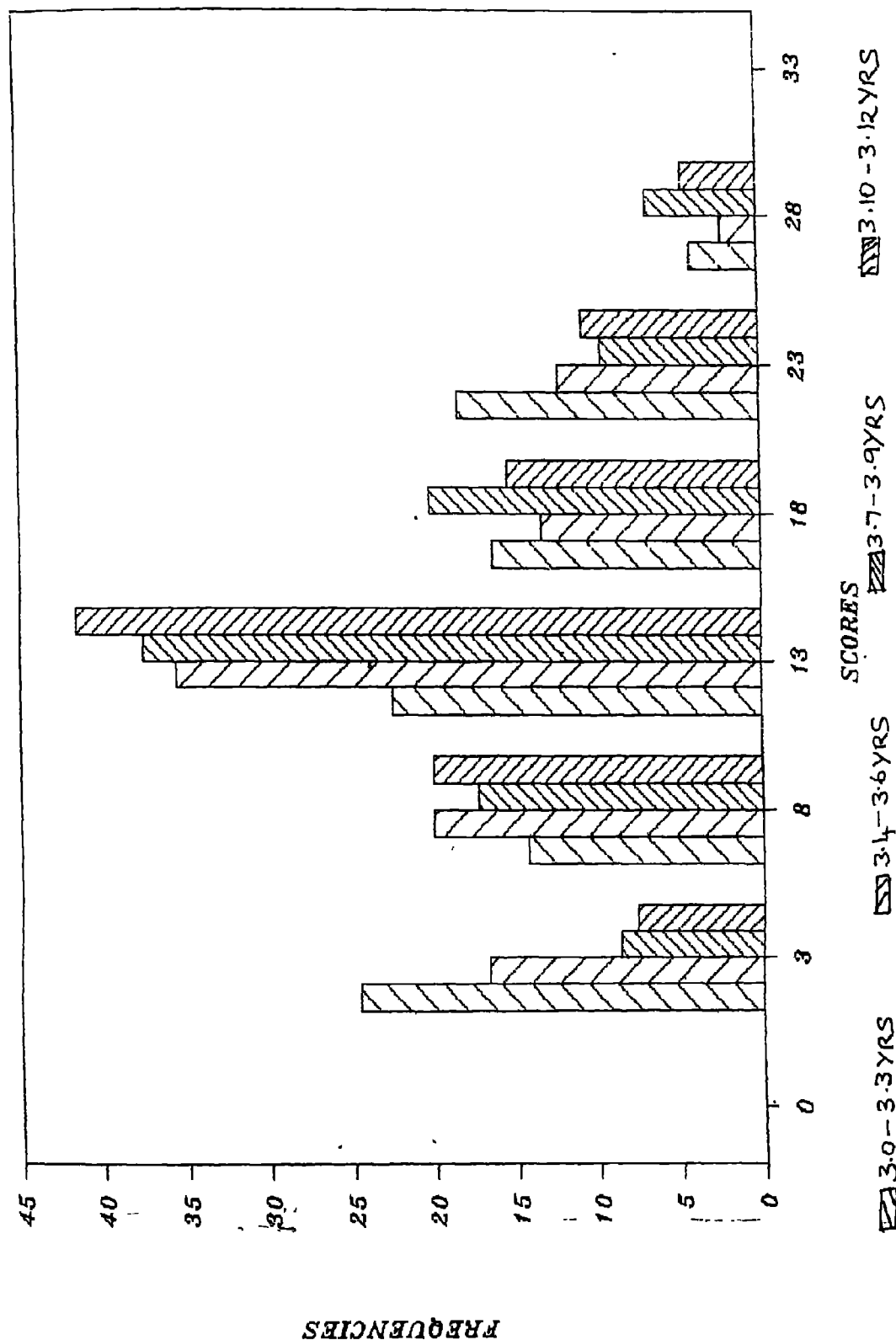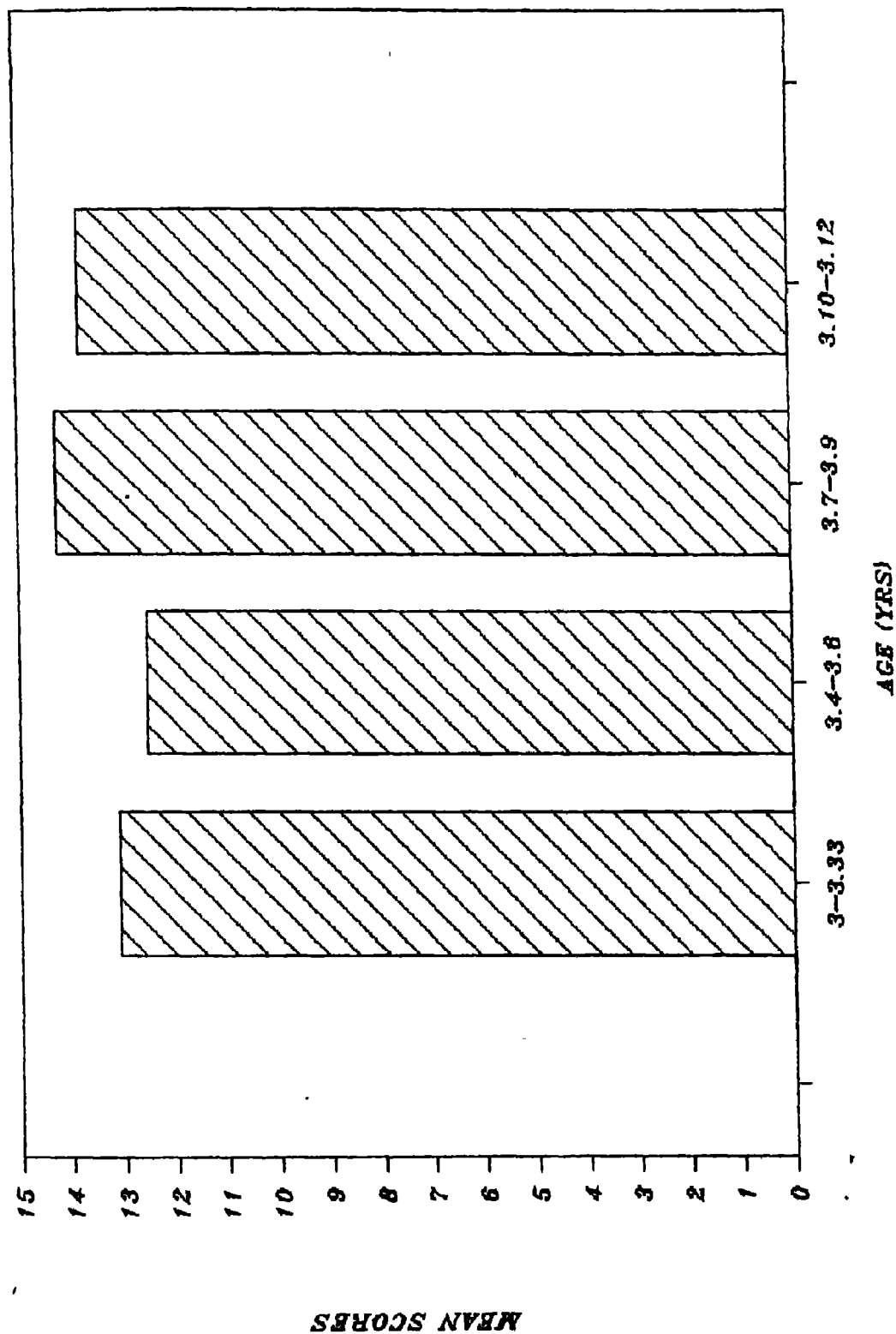
TABLE 4.6 (b)

RELEVANT STATISTICS OF MOTOR SKILLS SCORES

FOR THE DIFFERENT AGE GROUPS

	Group Yrs.	Mean	Median	Mode	SD	SK	Kur
1.	3.00 - 3.03	13.10	13.00	12.79	7.72	0.039	328
2.	3.04 - 3.06	12.55	12.37	12.01	6.48	0.083	238
3.	3.07 - 3.09	14.25	13.70	12.61	6.42	0.257	227
4.	3.10 - 3.12	13.76	13.18	12.01	6.09	0.286	223

The age-wise distributions of Motor-skills scores are almost normal. All of them are positively skewed, with the Kurtosis being highly platykurtic for group 1 and leptokurtic for the others.

TABLE 4.6 (c)

FIDUCIARY LIMITS OF MEAN & SD OF MOTOR SKILLS

SCORES FOR DIFFERENT AGE GROUPS

Group Yrs.	SEM	.95	.99
1. 3.00-3.03	1.10	10.93 - 15.26	10.25 - 15.94
2. 3.04-3.06	0.68	11.21 - 13.89	10.79 - 14.31
3. 3.07-3.09	0.62	13.01 - 15.48	12.62 - 15.87
4. 3.10-3.12	0.75	12.28 - 15.25	11.82 - 15.71

TABLE 4.6 (c) - Contd.

Group Yrs.	SE of SD	.95	.99
1. 3.00-3.30	0.78	6.18 - 9.26	5.70 - 9.74
2. 3.04-3.06	0.48	5.53 - 7.43	5.23 - 7.73
3. 3.07-3.09	0.44	5.54 - 7.29	5.26 - 7.57
4. 3.10-3.12	0.53	5.03 - 7.14	4.70 - 7.47

The .95 and .99 confidence limits for the Means and SDs of all the age-groups have relatively narrow ranges indicating the significance of the obtained means and standard deviations.

Fig. 4.7

C.S. OF THE TOTAL SAMPLE

SCORES   □ ORIGINAL   + SMOOTHED

FREQUENCIES
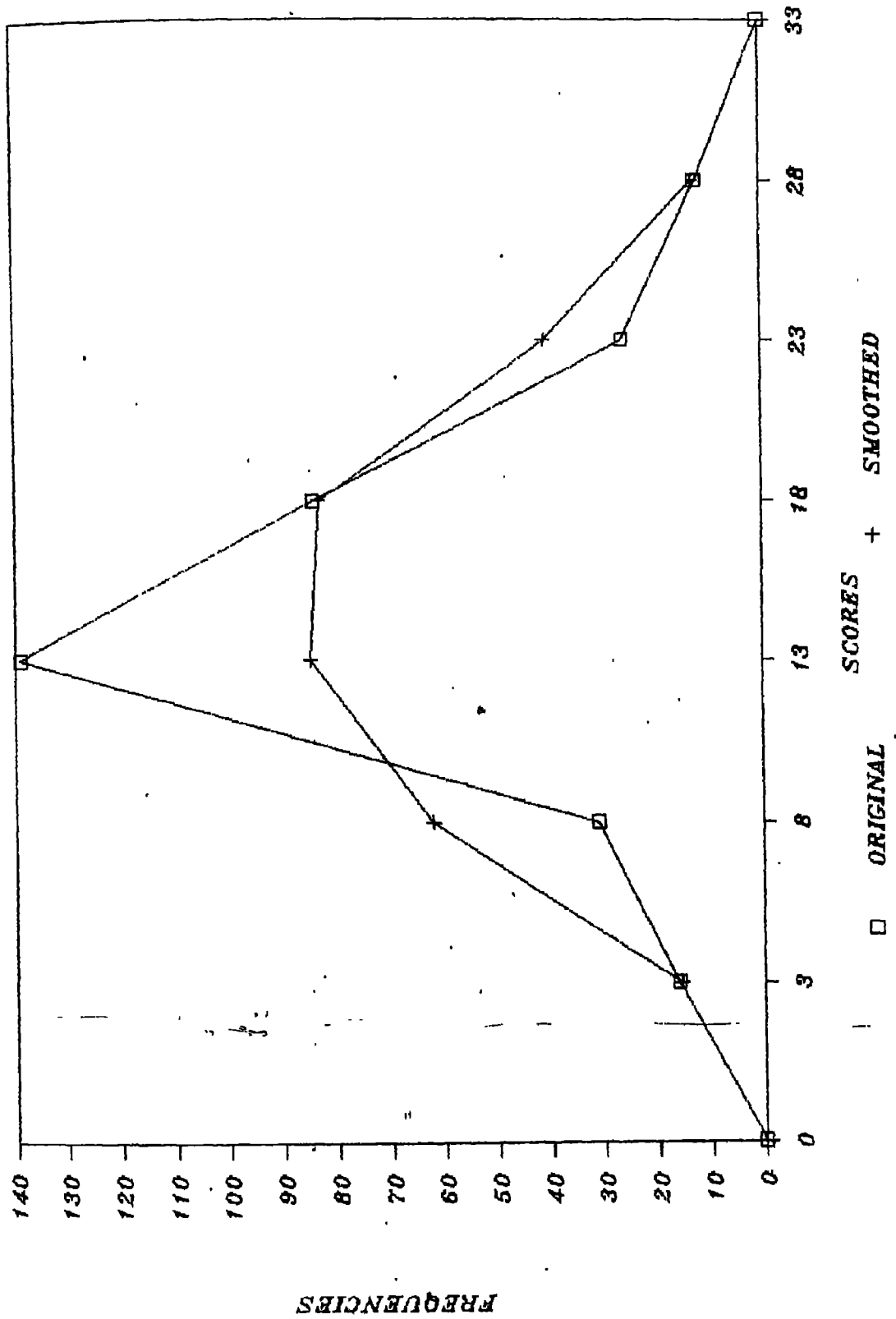
TABLE 4.7(b)

RELEVANT STATISTICS OF COGNITIVE SKILLS
SCORES FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	14.77	14.35	13.51	5.35	0.236	0.235

The scores of cognitive skills are normally distributed in the total sample. The curve is positively skewed and it is also leptokurtic.

TABLE 4.7 (c)

FIDUCIARY LIMITS OF MEAN & SD OF COGNITIVE SKILLS SCORES
FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	0.30	14.17 - 15.37	13.98 - 15.56
SD	0.22	4.92 - 5.77	4.79 - 5.91

The .95 and .99 confidence limits for the Mean and SD do not exhibit a wide range. This supports the normality of distribution and also the high degree of significance of the sample statistics.

COGNITIVE SKILLS AND SEX

TABLE 4.8 (a)

DISTRIBUTION OF COGNITIVE SKILLS

SCORES OF BOYS AND GIRLS

Scores	Boys %	Girls %
1 - 5	5.52	4.58
6 - 10	9.54	11.00
11 - 15	41.70	51.37
16 - 20	30.65	21.10
21 - 25	8.54	8.25
26 - 30	4.02	3.66

Figure 4.8 depicts the distribution of Cognitive Skills scores for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

Fig. 4.8.

C.S. OF BOYS AND GIRLS
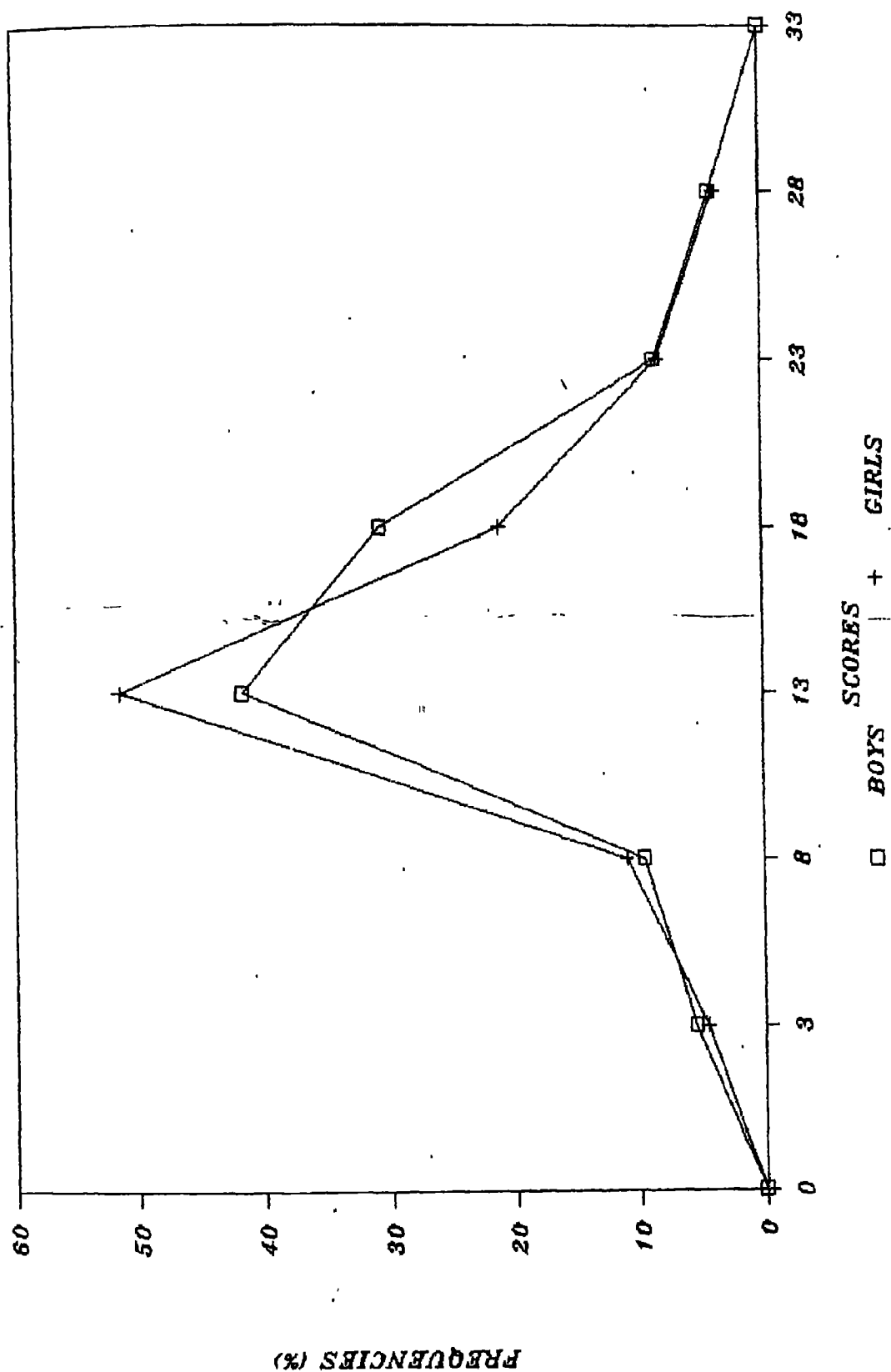
TABLE 4.8 (b)

RELEVANT STATISTICS OF COGNITIVE SKILLS

SCORES FOR BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	14.96	14.69	14.14	5.42	0.149	0.239
Girls	14.42	15.85	12.70	5.21	0.328	0.218

The cognitive skills scores are almost normally distributed in the two groups of boys and girls. The distributions are positively skewed, the skewness being more for the girls.

TABLE 4.8 (c)

FIDUCIARY LIMITS OF MEAN & SD OF COGNITIVE SKILLS SCORES FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	0.38	14.21 - 15.71	13.97 - 15.95
Girls	0.50	13.44 - 15.40	13.14 - 15.71
	SE OF SD		
Boys	0.27	4.88 - 5.95	4.71 - 6.12
Girls	0.35	4.51 - 5.90	4.29 - 6.12

The .95 and .99 confidence limits for the Means and SDs of Cognitive Skills of both the sexes have fairly narrow ranges, denoting the high dependability of these sample statistics.

COGNITIVE SKILLS AND AGE

TABLE 4.9 (a)

DISTRIBUTION OF COGNITIVE SKILLS SCORES

FOR THE DIFFERENT AGE GROUPS

Scores	3 - 3.3 yrs. %	3.4 - 3.6 yrs. %	3.7 - 3.9 yrs. %	3.10 - 3.12 yrs %
1 - 5	8.16	5.55	4.80	3.07
6 - 10	18.36	11.11	6.73	7.69
11 - 15	38.77	51.11	41.34	47.69
16 - 20	30.61	25.55	31.73	20.00
21 - 25	4.08	4.44	10.57	13.84
26 - 30	0	2.22	4.80	17.69

Figure 4.9 depicts the distribution of cognitive skills scores for different age groups in the form of frequency polygons. The frequencies are plotted as percentages. Figure 4.9(a) depicts the same in Bar Diagram. Bar diagram of the Mean scores of C.S. for the age group are given in fig. No. 4.9 (b).

C.S. OF DIFFERENT AGE GROUPS

Fig 4.9

237

□ 3.0 – 3.3 YRS + 3.4 – 3.6 YRS ◇ 3.7 – 3.9 YRS △ 3.10 – 3.12 YRS

SCORES

FREQUENCIES (%)

C.S. OF DIFFERENT AGE GROUPS

Fig. 4.9.a

FREQUENCIES (%)

SCORES

3.0-3.3YRS   3.4-3.6YRS   3.7-3.9YRS   3.10-3.12YRS

C.S. OF DIFFERENT AGE GROUPS

Fig. 4.9.6

AGE (YEARS)

MEAN SCORES

0   3-3.3   3.4-3.6   3.7-3.9   3.10-3.12   0

17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
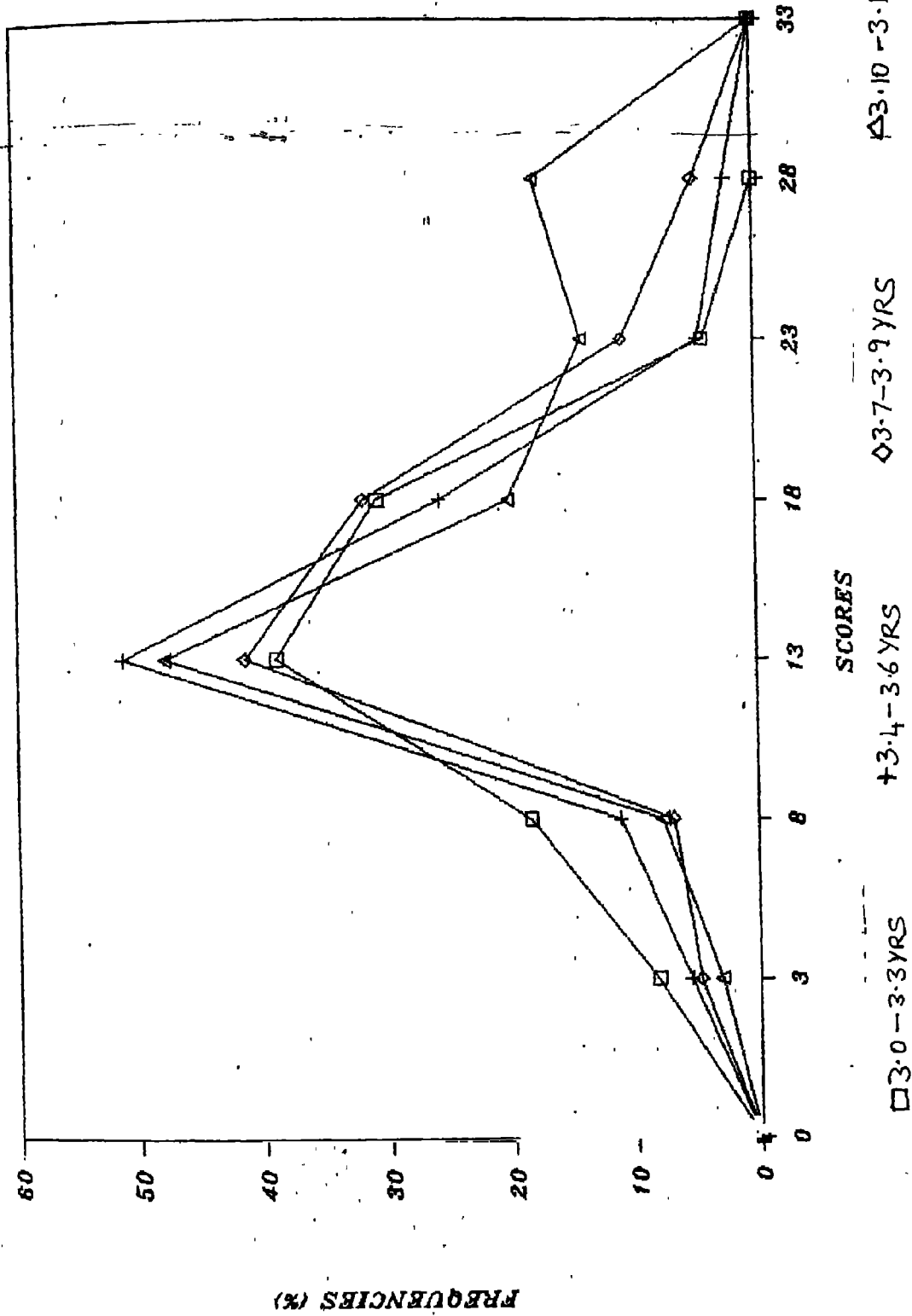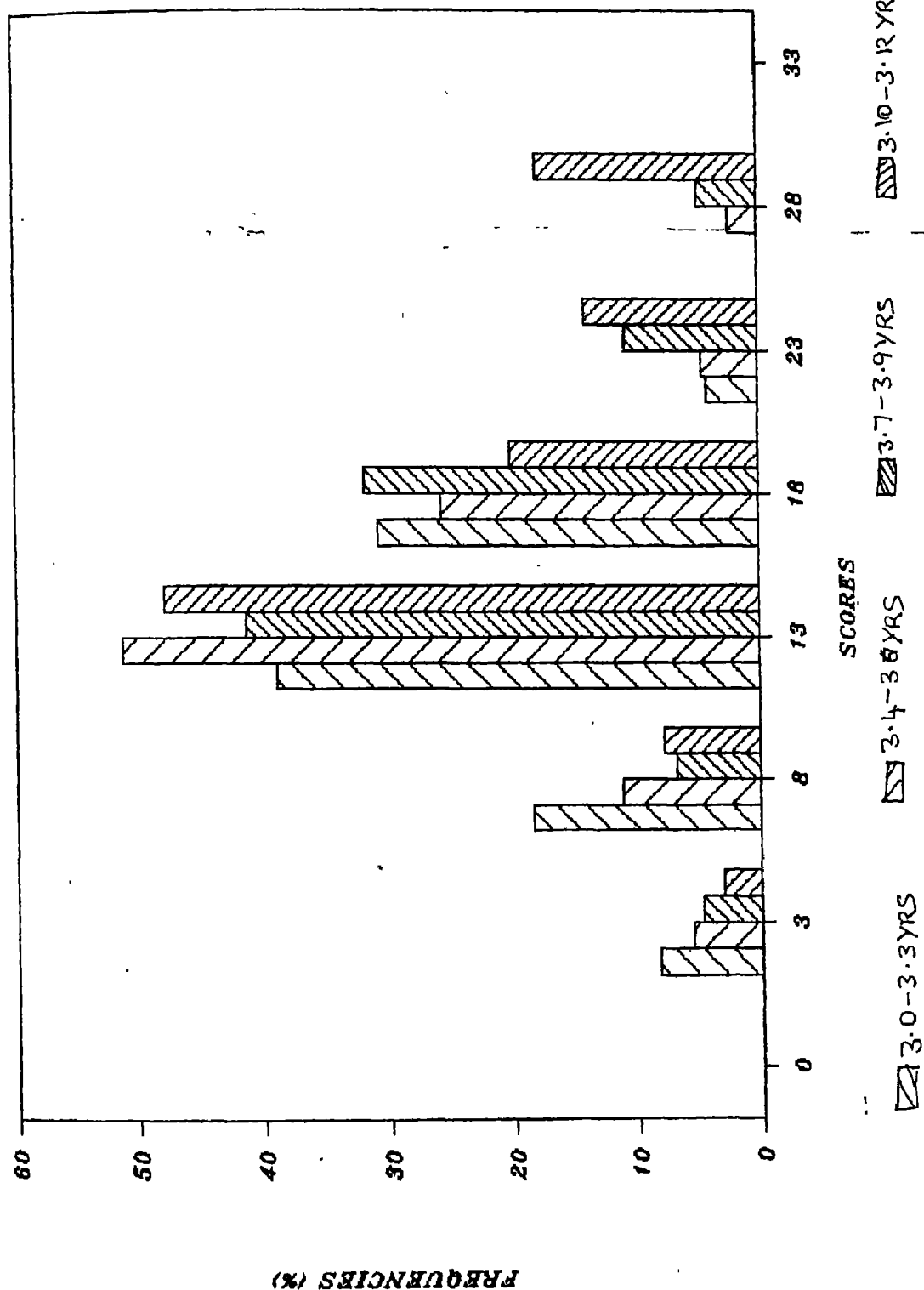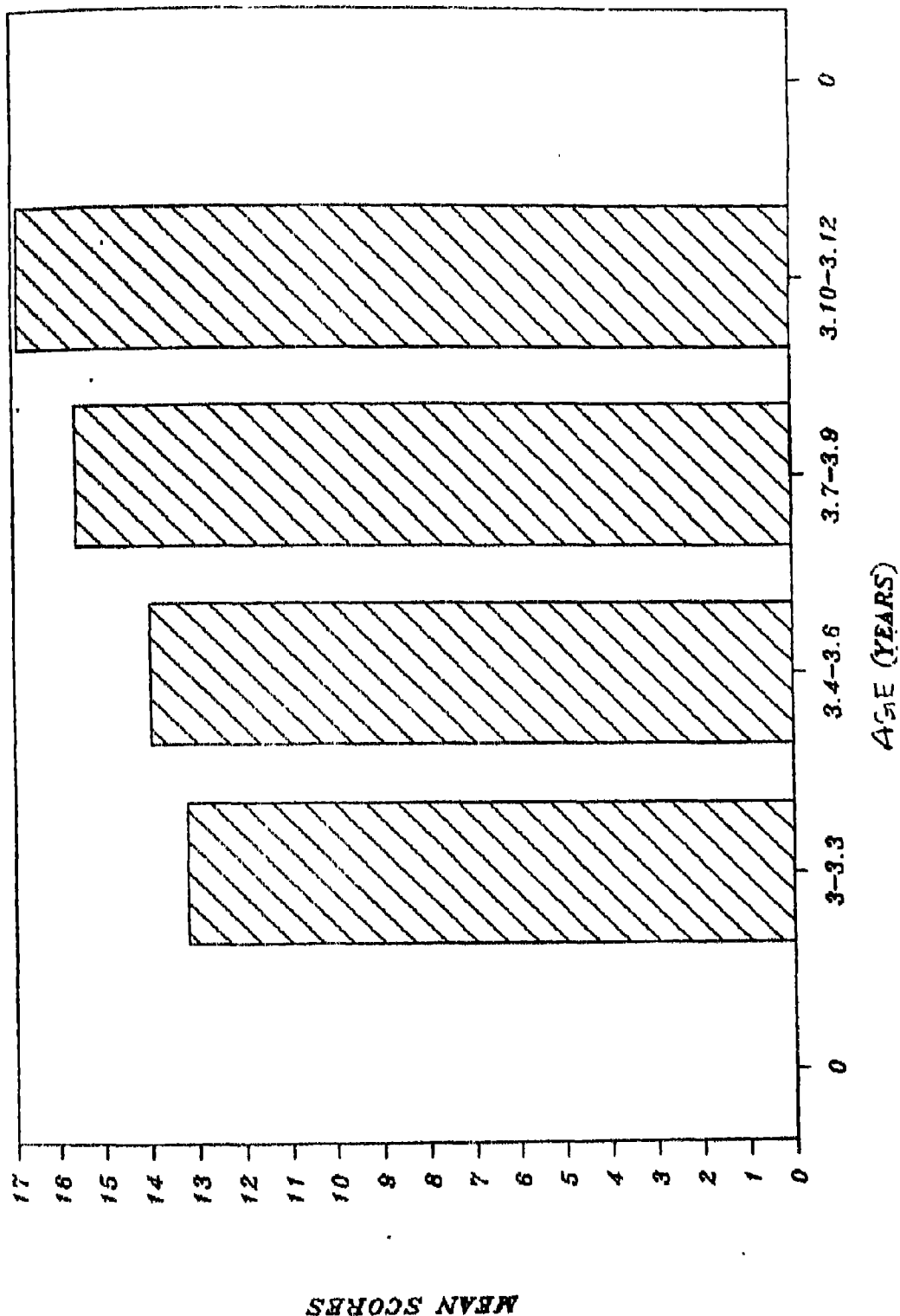
TABLE 4.9(b)

RELEVANT STATISTICS OF COGNITIVE SKILLS

SCORES FOR THE DIFFERENT AGE GROUPS

Group Yrs.	Mean	Median	Mode	SD	SK	Kur
1. 3.00-3.03	13.20	13.53	14.17	4.94	-0.200	0.259
2. 3.04-3.06	13.95	13.76	13.39	4.82	0.118	0.227
3. 3.07-3.09	15.55	15.15	14.36	5.42	0.221	0.250
4. 3.10-3.12	15.85	14.61	12.15	5.75	0.646	0.261

The distributions for all the four groups are near normal, with the curves being positively skewed, excepting the 1st group. All the distributions are leptokurtic.

TABLE 4.9(c)

FIDUCIARY LIMITS OF MEAN & SD OF COGNITIVE SKILLS SCORES

FOR THE DIFFERENT AGE GROUPS

Group	SEM	.95	.99
1. 3.00-3.03	0.71	11.82 - 14.59	11.38 - 15.03
2. 3.04-3.06	0.51	12.95 - 14.94	12.63 - 15.26
3. 3.07-3.09	0.53	14.51 - 16.59	14.18 - 16.92
4. 3.10-3.12	0.71	14.45 - 17.24	14.01 - 17.69

TABLE 4.9(c) - Contd.

Group	SE OF SD	.95	.99
1. 3.00-3.03	0.50	3.96 - 5.93	3.65 - 6.24
2. 3.04-3.06	0.36	4.12 - 5.53	3.89 - 5.76
3. 3.07-3.09	0.38	4.68 - 6.15	4.44 - 6.39
4. 3.10-3.12	0.51	4.76 - 6.74	4.44 - 7.06

The .95 and .99 confidence limits for the Means and SDS of all the groups have relatively narrow ranges. This indicates the significance of the obtained Means and SDs.

TABLE 4.10(a)

DISTRIBUTION OF PSYCHOSOCIAL SKILLS

SCORES FOR THE TOTAL SAMPLE

SCORES	F	SMF
1 - 5	33	40.67
6 - 10	89	71.33
11 - 15	92	79.00
16 - 20	56	57.00
21 - 25	23	31.33
26 - 30	15	12.67
Total	308	

Figure 4.10 gives the original and smoothed frequency polygons of Psychosocial skills scores for the total sample.

Fig 4.10

P.S. OF THE TOTAL SAMPLE

□   ORIGINAL   +   SMOOTHED

SCORES

FREQUENCIES
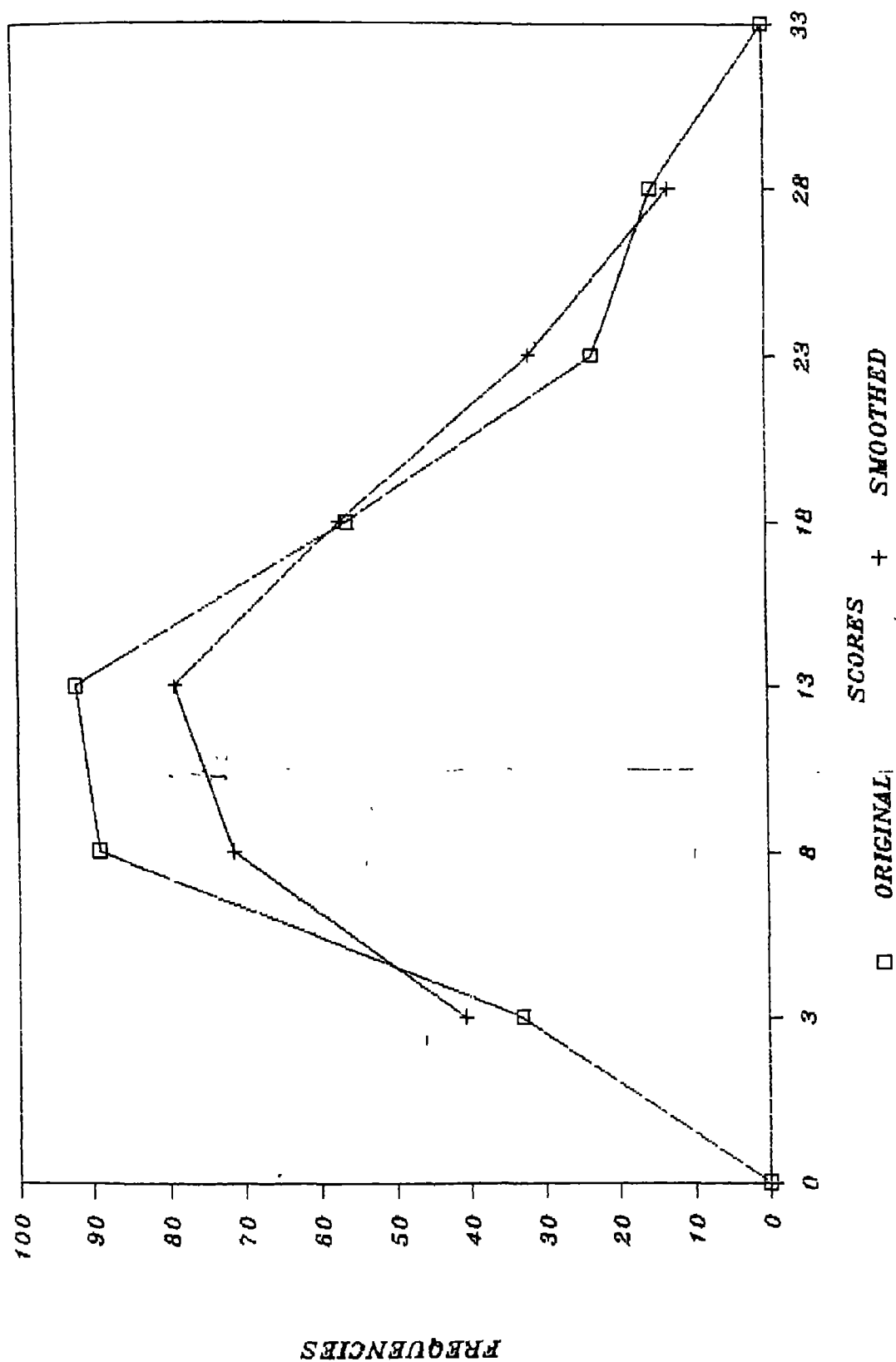
TABLE 4.10 (b)

RELEVANT STATISTICS OF PSYCHOSOCIAL SKILLS SCORES FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	12.87	12.23	10.97	6.39	0.254	0.267

The distribution of Psychosocial scores for the total sample is fairly normal. The distribution is positively skewed and slightly platykurtic in nature.

TABLE 4.10 (c)

FIDUCIARY LIMITS OF MEAN & SD OF PSYCHOSOCIAL SKILLS SCORES FOR THE TOTAL SAMPLE

STATISTIC	SE	.95	.99
Mean	0.36	12.15 - 13.58	11.93 - 13.81
SD	0.25	5.88 - 6.90	5.72 - 7.06

The .95 and .99 confidence limits for the Mean and SD of Psychosocial scores for the total sample have very narrow ranges. This implies that the sample statistics are dependable as true measures.

PSYCHOSOCIAL SKILLS AND SEX

TABLE 4.11 (a)

DISTRIBUTION OF PSYCHOSOCIAL SKILLS

SCORES FOR BOYS AND GIRLS

Scores	Boys %	Girls %
1 - 5	11.05	10.09
6 - 10	28.14	30.27
11 - 15	30.65	28.44
16 - 20	18.59	17.43
21 - 25	7.03	8.25
26 - 30	4.52	5.50

Figure 4.11 depicts the distribution of Psychosocial skills for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

P.S. OF BOYS AND GIRLS

Fig. 4.1.

FREQUENCIES (%)

SCORES   □ BOYS   + GIRLS

570
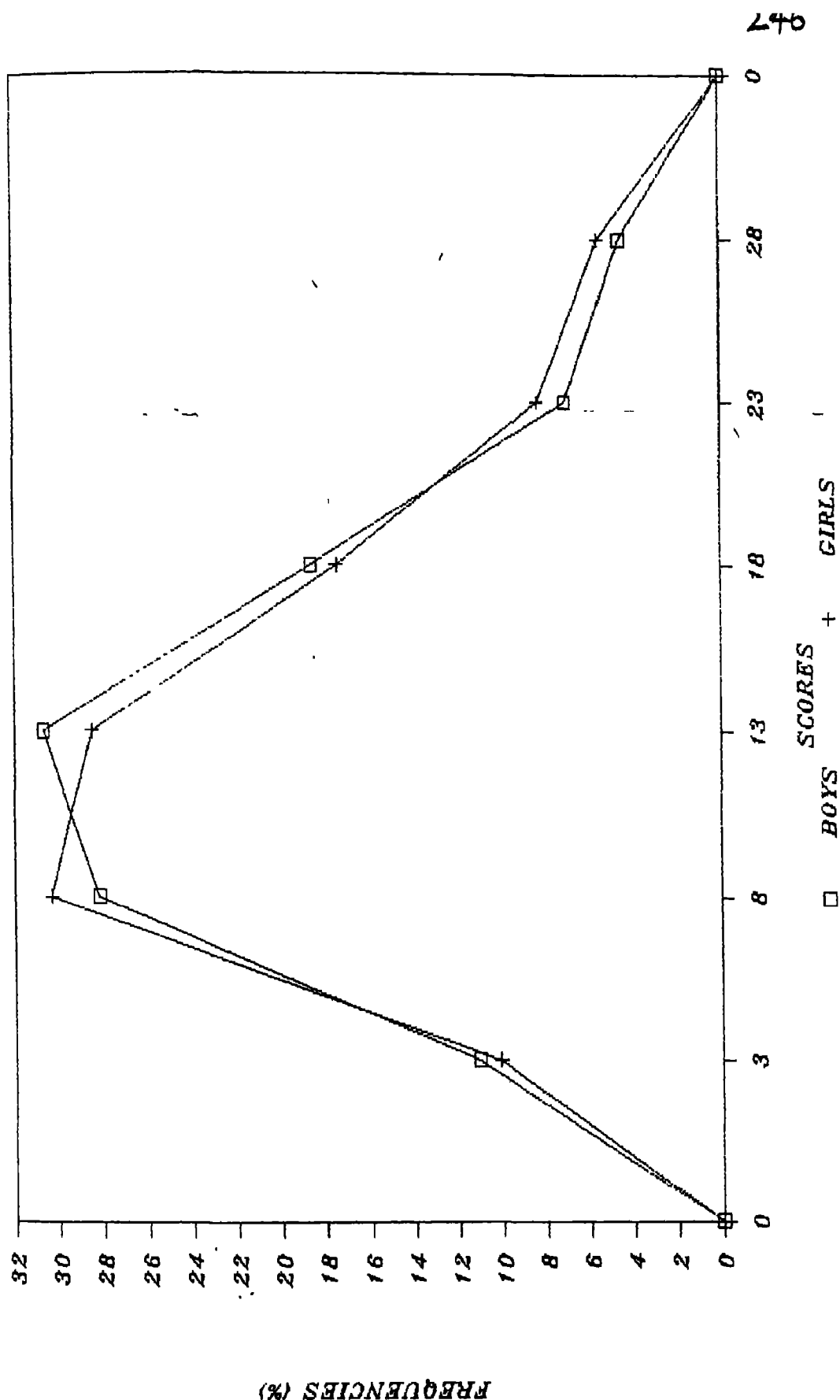
TABLE 4.11 (b)

RELEVANT STATISTICS OF PSYCHOSOCIAL SKILLS

SCORES FOR BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	12.79	12.26	11.18	6.31	0.252	0.268
Girls	13.00	12.19	10.58	6.53	0.372	0.268

The distribution of psychosocial scores for the boys and girls are near normal. Both the distributions are positively skewed, the skewness being more for the girls. Both the distributions are slightly platykurtic in nature.

TABLE 4.11 (c)

FIDUCIARY LIMITS OF MEAN & SD OF PSYCHOSOCIAL SKILLS

SCORES FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	0.44	11.92 - 13.67	11.64 - 13.95
Girls	0.62	11.77 - 14.22	11.38 - 14.61
	SE OF SD		
Boys	0.31	5.69 - 6.94	5.49 - 7.13
Girls	0.44	5.66 - 7.40	5.38 - 7.67

The .95 and .99 confidence limits for boys and girls have fairly narrow ranges, implying that the sample statistics are highly dependable.

PSYCHOSOCIAL SKILLS AND AGE

TABLE 4.12 (a)

DISTRIBUTION OF PSYCHOSOCIAL SKILLS SCORES

FOR THE DIFFERENT AGE GROUPS

Scores	3 - 3.3 yrs. %	3.4 - 3.6 yrs. %	3.7 - 3.9 yrs. %	3.10 - 3.12 yrs %
1 - 5	8.16	16.66	12.5	1.53
6 -10	36.73	31.11	28.84	20.00
11 -15	34.69	24.44	31.73	30.76
16 -20	16.32	17.77	16.34	23.07
21 -25	4.08	4.44	6.73	15.38
26 -30	0	5.55	3.84	9.23

Figure 4.12 depicts the distribution of psychosocial scores for different age groups in the form of frequency polygons. The frequencies are plotted as percentages. Fig. 4.12 (a) depicts the same in Bar Diagram. Bar diagram of Mean Scores of psychosocial skills is depicted in fig. 4.12(b).

P.S. OF DIFFERENT AGE GROUPS   Fig 4.12

FREQUENCIES (%)

SCORES

□ 3.0−3.3YRS   + 3.4−3.6YRS   ◇3.7−3.9YRS   △3.10−3.12YRS

249

P.S. OF DIFFERENT AGE GROUPS

Fig. 4.12.a

FREQUENCIES (%)

SCORES

3.0-3.3YRS 3.4-3.6YRS 3.7-3.9YRS 3.10-3.12YRS

250

Fig 4.12.6-

P.S. OF DIFFERENT AGE GROUPS

MEAN SCORES
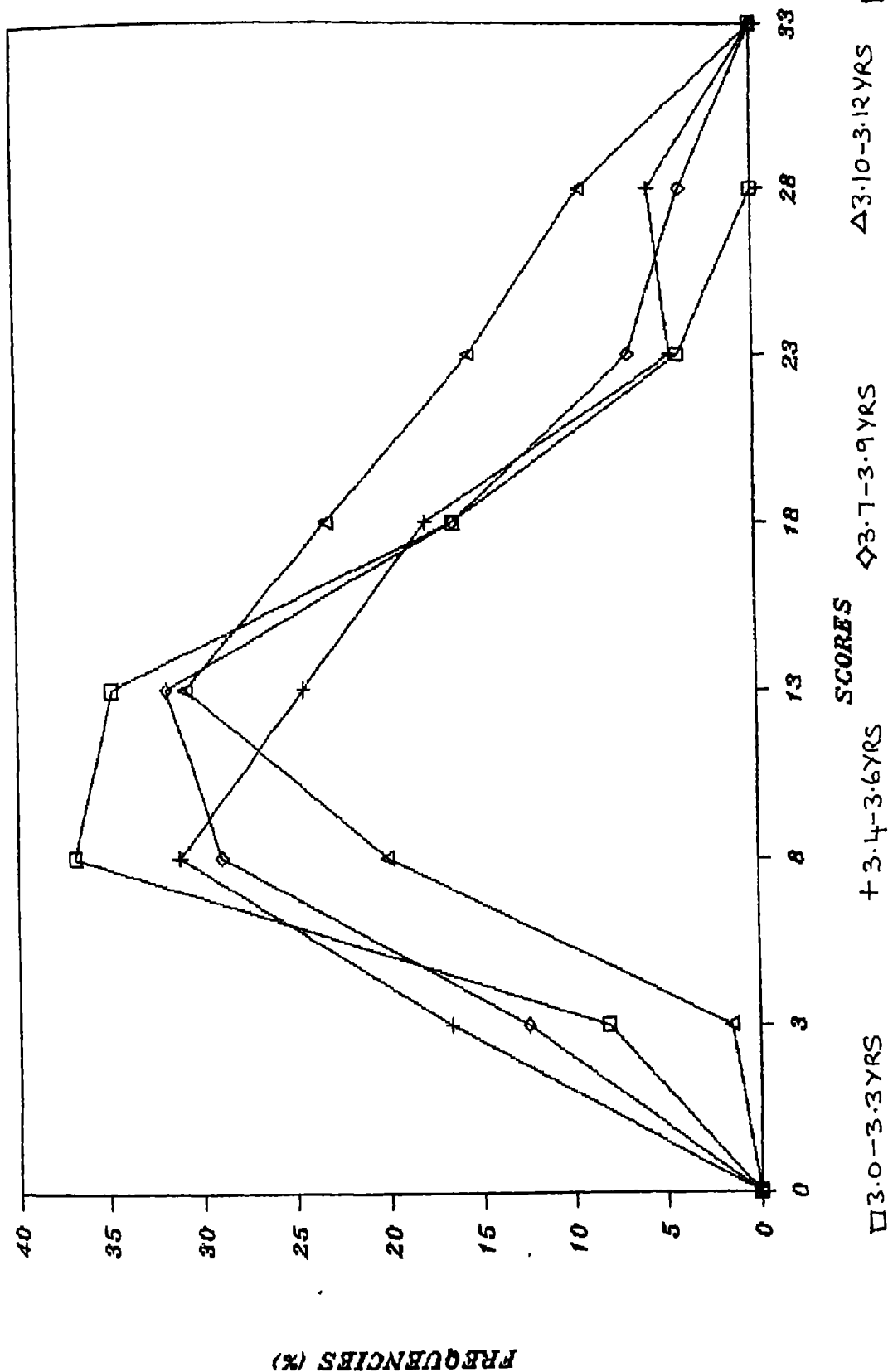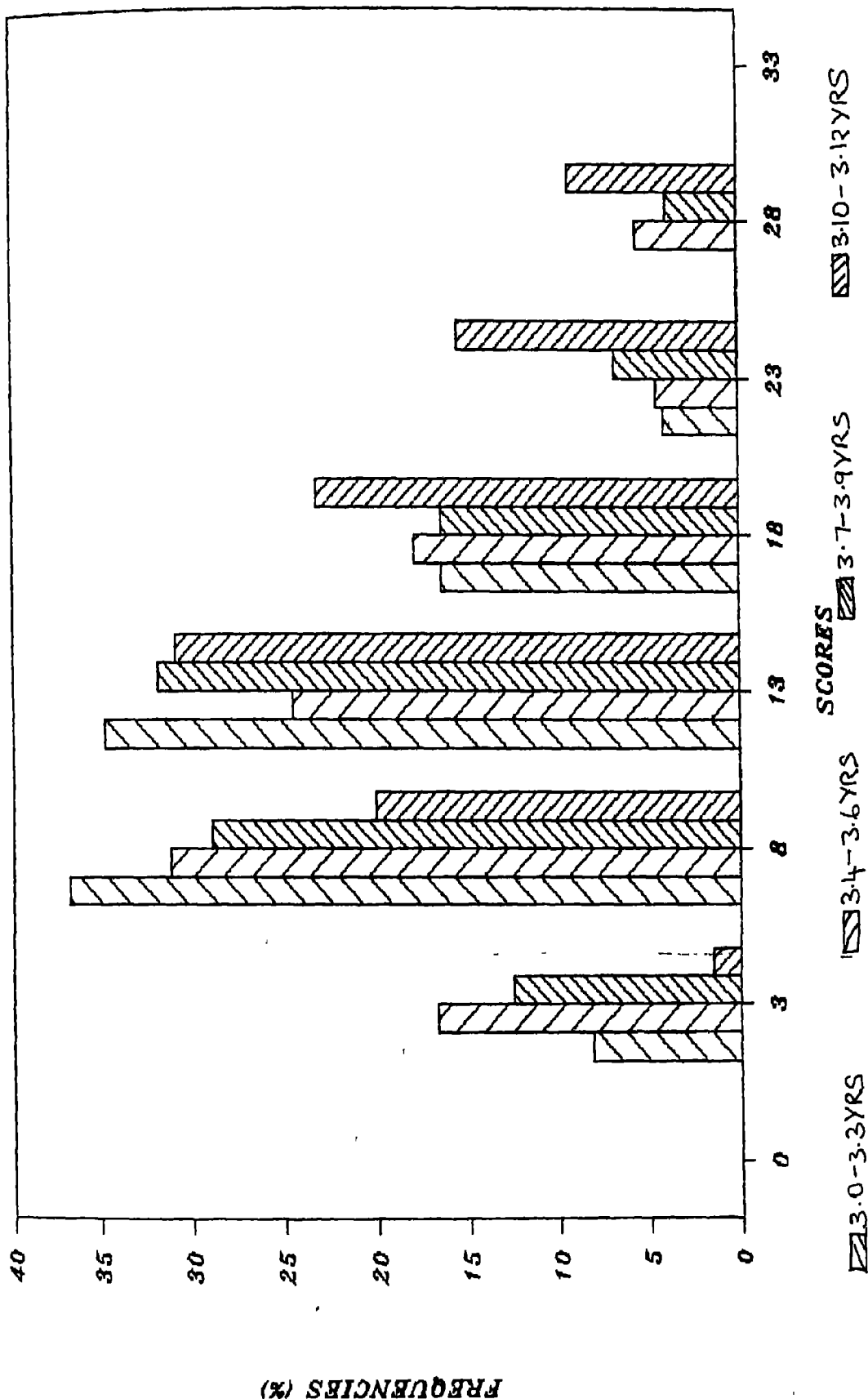
AGE (YRS)
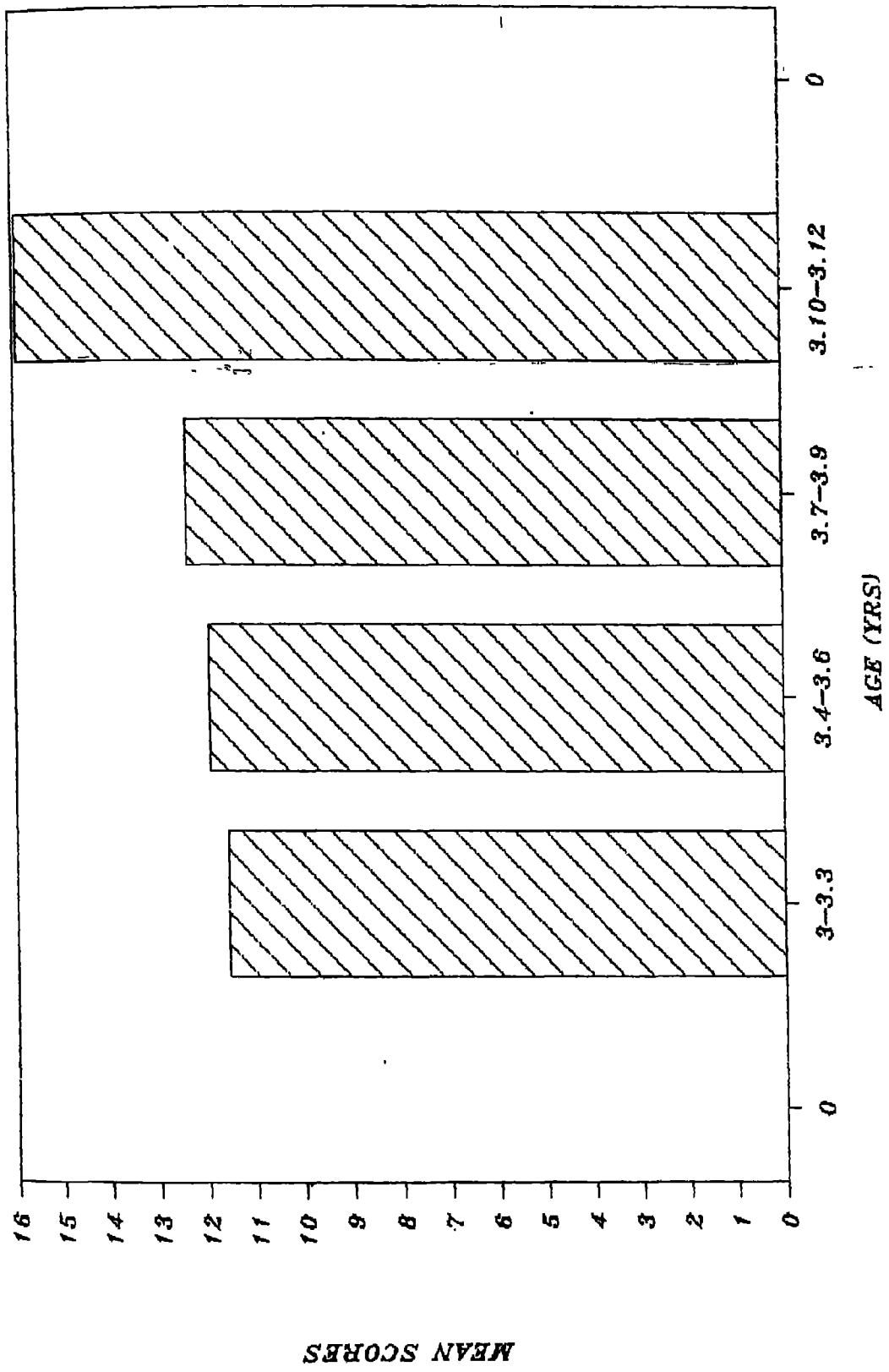
TABLE 4.12 (b)

RELEVANT STATISTICS OF PSYCHOSOCIAL SKILLS FOR

THE DIFFERENT AGE GROUPS

Group Yrs.	Mean	Median	Mode	SD	SK	Kur
1. 3.00-3.03	11.57	11.23	10.56	4.84	0.210	0.272
2. 3.04-3.06	11.94	10.95	8.97	6.68	0.444	0.277
3. 3.07-3.09	12.37	11.86	10.84	6.22	0.246	0.256
4. 3.10-3.12	15.92	15.12	13.52	6.31	0.380	0.265

The distribution of psychosocial scores for the various age groups are near normal. All the four distributions have positive skewness. Excepting group 3, which is leptokurtic in nature, the other groups are platykurtic.

TABLE 4.12 (c)

FIDUCIARY LIMITS OF MEAN & SD OF PSYCHOSOCIAL SKILLS

FOR THE DIFFERENT AGE GROUPS

Group Yrs.	SEM	.95	.99
1. 3.00-3.03	0.69	10.21 - 12.92	9.78 - 13.35
2. 3.04-3.06	0.70	10.56 - 13.32	10.12 - 13.76
3. 3.07-3.09	0.61	11.17 - 13.57	10.79 - 13.95
4. 3.10-3.12	0.78	14.38 - 17.45	13.90 - 17.94

TABLE 4.12 (c) - Contd.

Group Yrs.	SE OF SD	.95	.99
1. 3.00-3.03	0.49	3.88 - 5.80	3.57 - 6.11
2. 3.04-3.06	0.50	5.70 - 7.66	5.39 - 7.97
3. 3.07-3.09	0.43	5.37 - 7.07	5.10 - 7.34
4. 3.10-3.12	0.55	5.22 - 7.40	4.88 - 7.75

The .95 and .99 confidence limits for the Means and SDs of psychosocial scores of the different age groups do not have broad ranges. This attributes to the high dependability of sample statistics.

COMPREHENSION OF ENGLISH LANGUAGE

TABLE 4.13 (a)

DISTRIBUTION OF COMPREHENSION OF ENGLISH LANGUAGE

SCORES FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 2	31	28.67
3 - 4	55	66.00
5 - 6	112	83.33
7 - 8	83	74.00
9 - 10	27	36.67
Total	308	

Figure 4.13 gives the original and smoothed frequency polygons of comprehension of English language scores for the total sample.

Fig 4.13.

C.E.L. OF THE TOTAL SAMPLE

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES
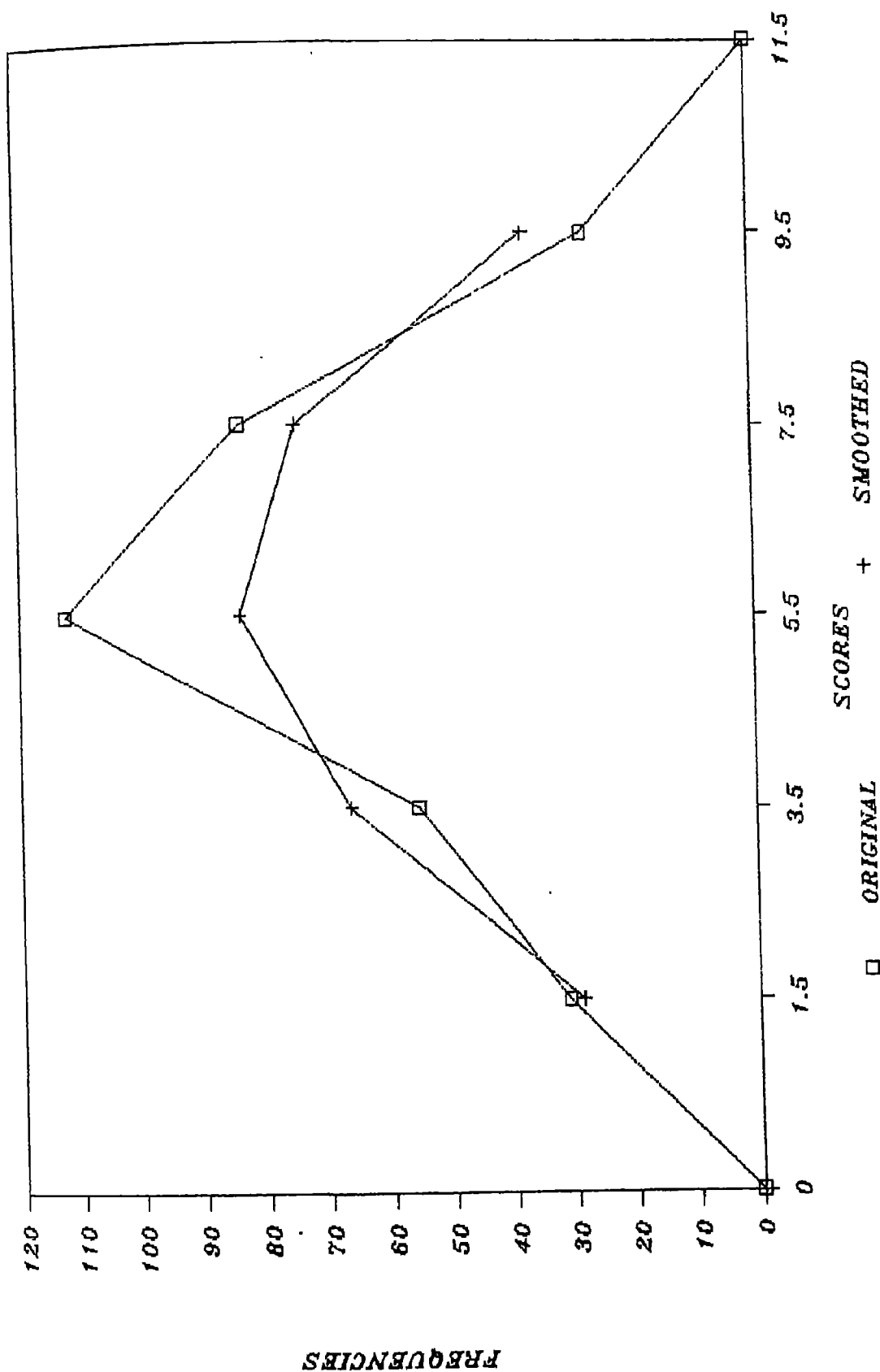
TABLE 4.13 (b)

RELEVANT STATISTICS OF COMPREHENSION OF ENGLISH LANGUAGE
SCORES FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	5.62	5.71	5.88	2.18	-0.123	0.263

The distribution of comprehension of English
language scores for the total sample is near normal. The
distribution has negative skewness and is mesokurtic in
nature.

TABLE 4.13 (c)

FIDUCIARY LIMITS OF MEAN & SD OF COMPREHENSION OF ENGLISH
LANGUAGE SCORES FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	0.12	5.38 – 5.87	5.30 – 5.95
SD	8.85	2.01 – 2.36	1.95 – 2.41

The .95 and .99 confidence limits for the Mean
and SD of Comprehension of English Language scores are highly
narrow in their ranges, thus implying that the sample
statistics are dependable as true measures.

COMPREHENSION OF ENGLISH LANGUAGE AND SEX

TABLE 4.14(a)

DISTRIBUTION OF COMPREHENSION OF ENGLISH LANGUAGE

SCORES FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
1 - 2	9.04	11.92
3 - 4	17.08	19.26
5 - 6	37.18	34.86
7 - 8	28.64	23.85
9 - 10	8.04	10.09

Figure 4.14 depicts the distribution of Comprehension of English Language scores for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

C.E.L. OF BOYS AND GIRLS

Fig 4.14

FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS

258
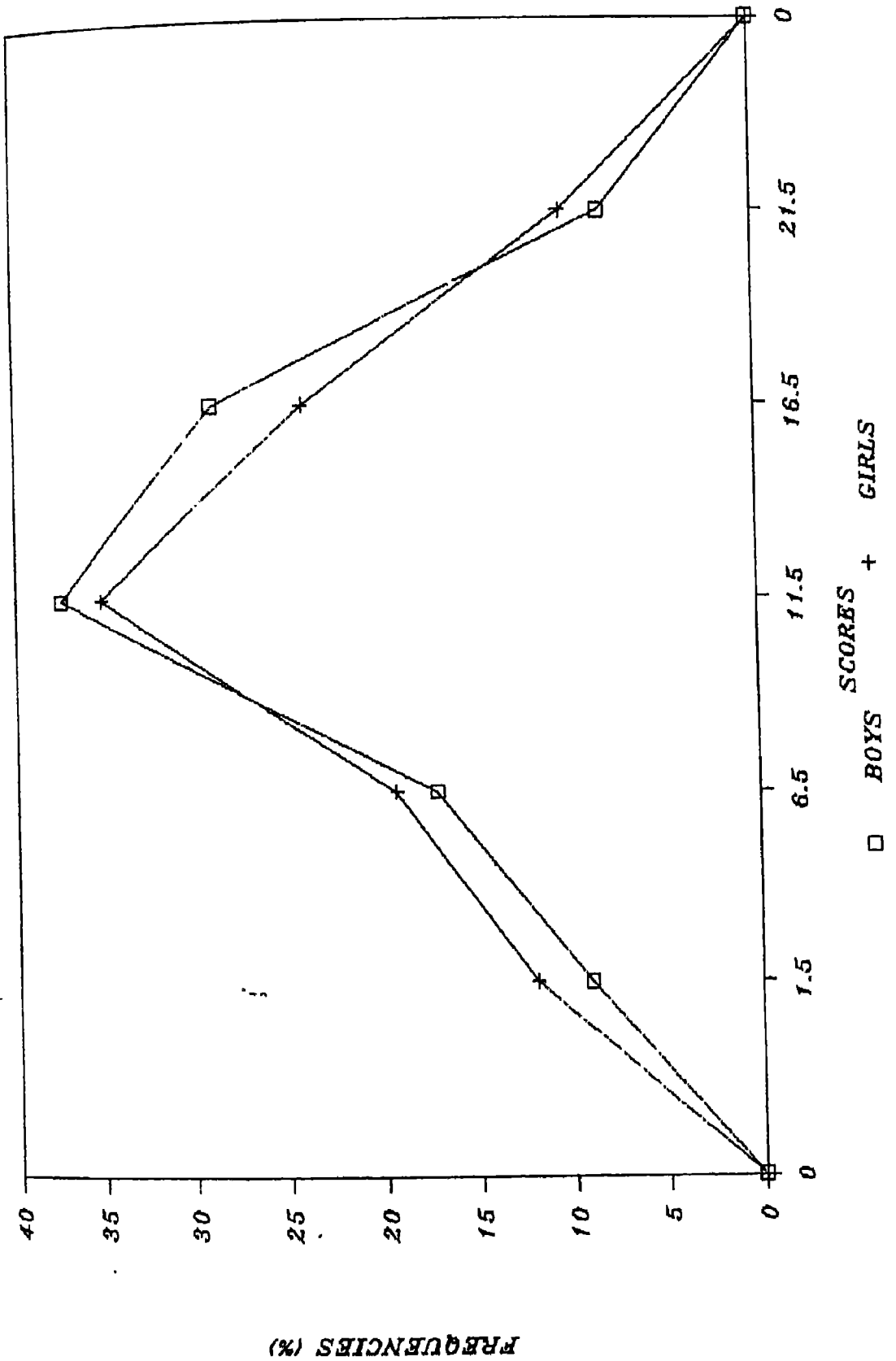
TABLE 4.14(b)

RELEVANT STATISTICS OF COMPREHENSION OF ENGLISH LANGUAGE
SCORES FOR BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	5.69	5.78	5.96	2.12	-0.127	0.256
Girls	5.51	5.57	5.70	2.29	-0.079	0.267

The comprehension of English language scores are normally distributed for both boys and girls. Both the distributions are negatively skewed, the distribution being slightly leptokurtic for boys and platykurtic for girls.

TABLE 4.14(c)

FIDUCIARY LIMITS OF MEAN & SD OF COMPREHENSION OF ENGLISH
LANGUAGE SCORES FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	0.15	5.39 -	5.98	5.30 -	6.08
Girls	0.21	5.08 -	5.94	4.95 -	6.08
	SE OF SD				
Boys	0.10	1.91 -	2.33	1.85 -	2.40
Girls	0.15	1.98 -	2.59	1.88 -	2.69

The .95 and .99 confidence limits for the Means and SDs of the Comprehension of English language scores for both boys and girls do not have very wide ranges. This implies that the sample statistics are dependable.

COMPREHENSION OF ENGLISH LANGUAGE AND AGE

TABLE 4.15 (a)

DISTRIBUTION OF COMPREHENSION OF ENGLISH LANGUAGE SCORES FOR THE DIFFERENT AGE GROUPS

Scores	3 - 3.3 yrs. F %	3.4 - 3.6 yrs. F %	3.7 - 3.9 yrs. F %	3.10 - 3.12 yrs F %
1 - 2	18.36	8.88	8.65	7.69
3 - 4	14.28	20.00	16.34	20.00
5 - 6	22.44	51.11	29.80	30.92
7 - 8	24.48	16.66	33.65	42.30
9 - 10	20.40	3.33	11.53	3.07

Figure 4.15 depicts the distribution of Comprehension of English language scores for different age groups in the form of Frequency polygons. The frequencies are plotted as percentages. Figure 4.15 (a) depicts the same in Bar Diagram. Bar Diagram of the Mean scores of the age groups are given in Figure 4.15 (b).

Fig 4.15

C.E.L. OF DIFFERENT AGE GROUPS

FREQUENCIES (%)

SCORES

□3.0-3.3YRS   +3.4-3.6YRS   ◇3.7-3.9YRS   △3.10-3.12YRS

C.E.L. OF DIFFERENT AGE GROUPS

Fig. 4.15a.

FREQUENCIES (%)

SCORES

3.0-3.3 YRS   3.4-3.6 YRS   3.7-3.9 YRS   3.10-3.12 YRS

C.E.L. OF DIFFERENT AGE GROUPS

Fig 4.15.6

AGE (YRS)
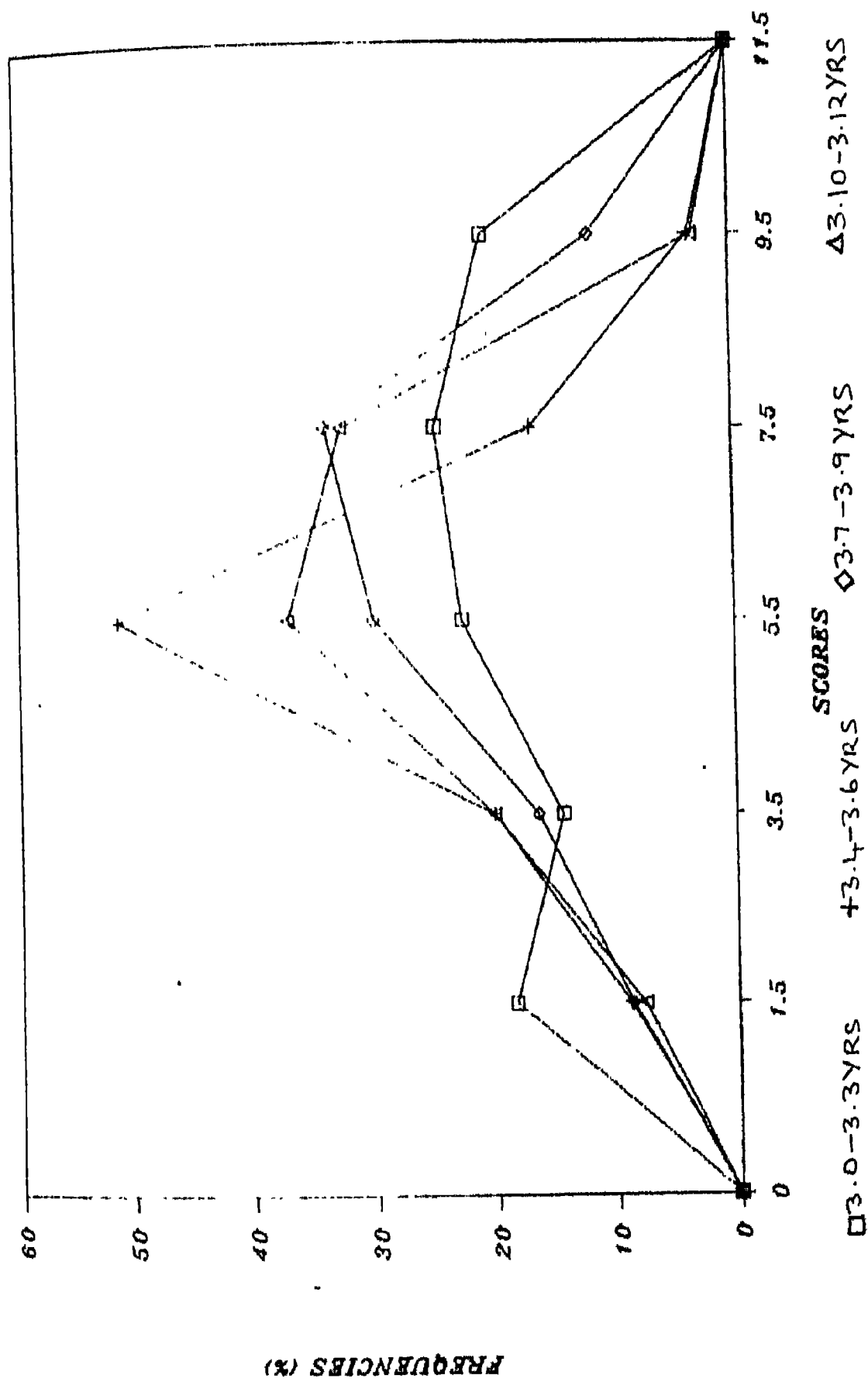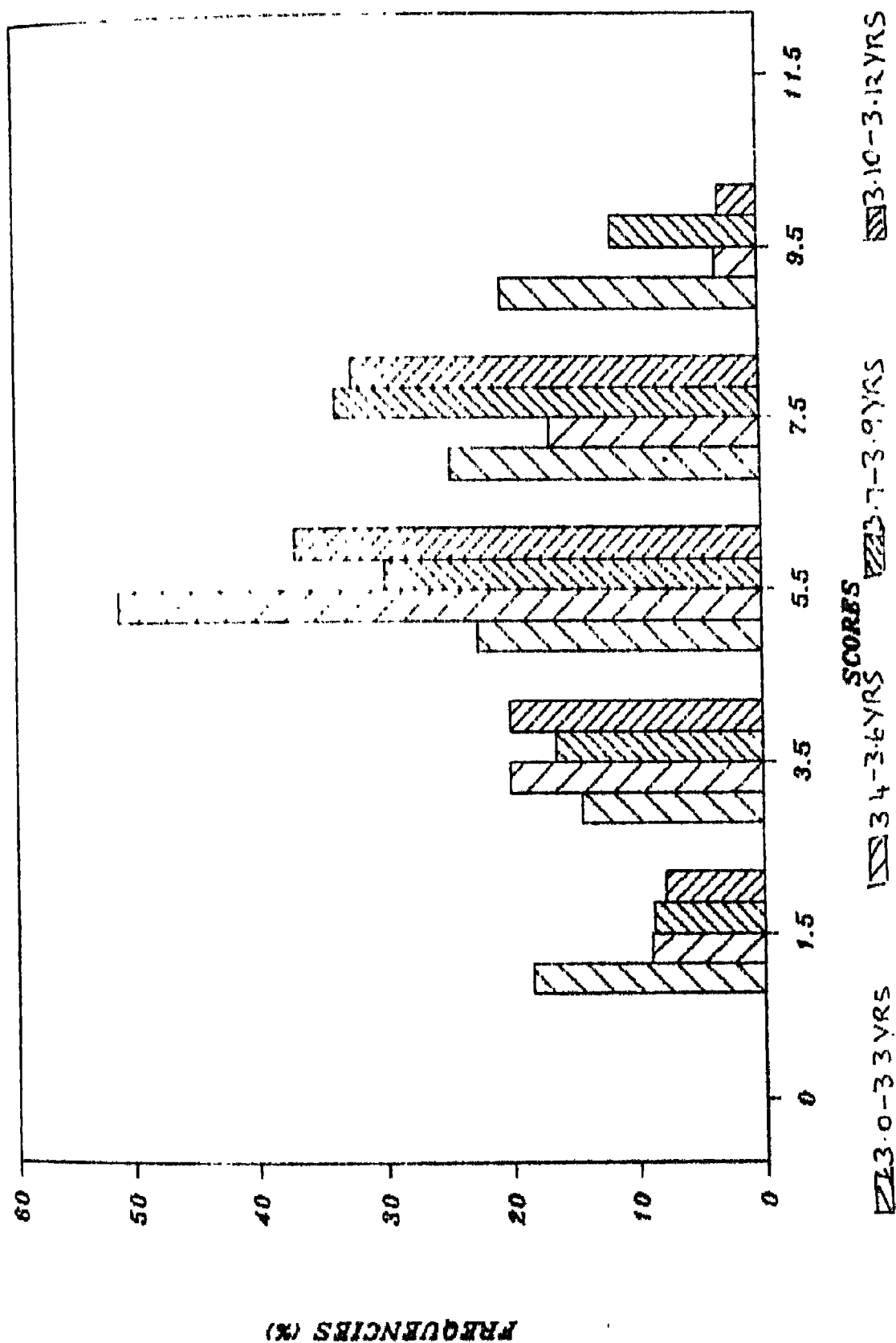
MEAN SCORES
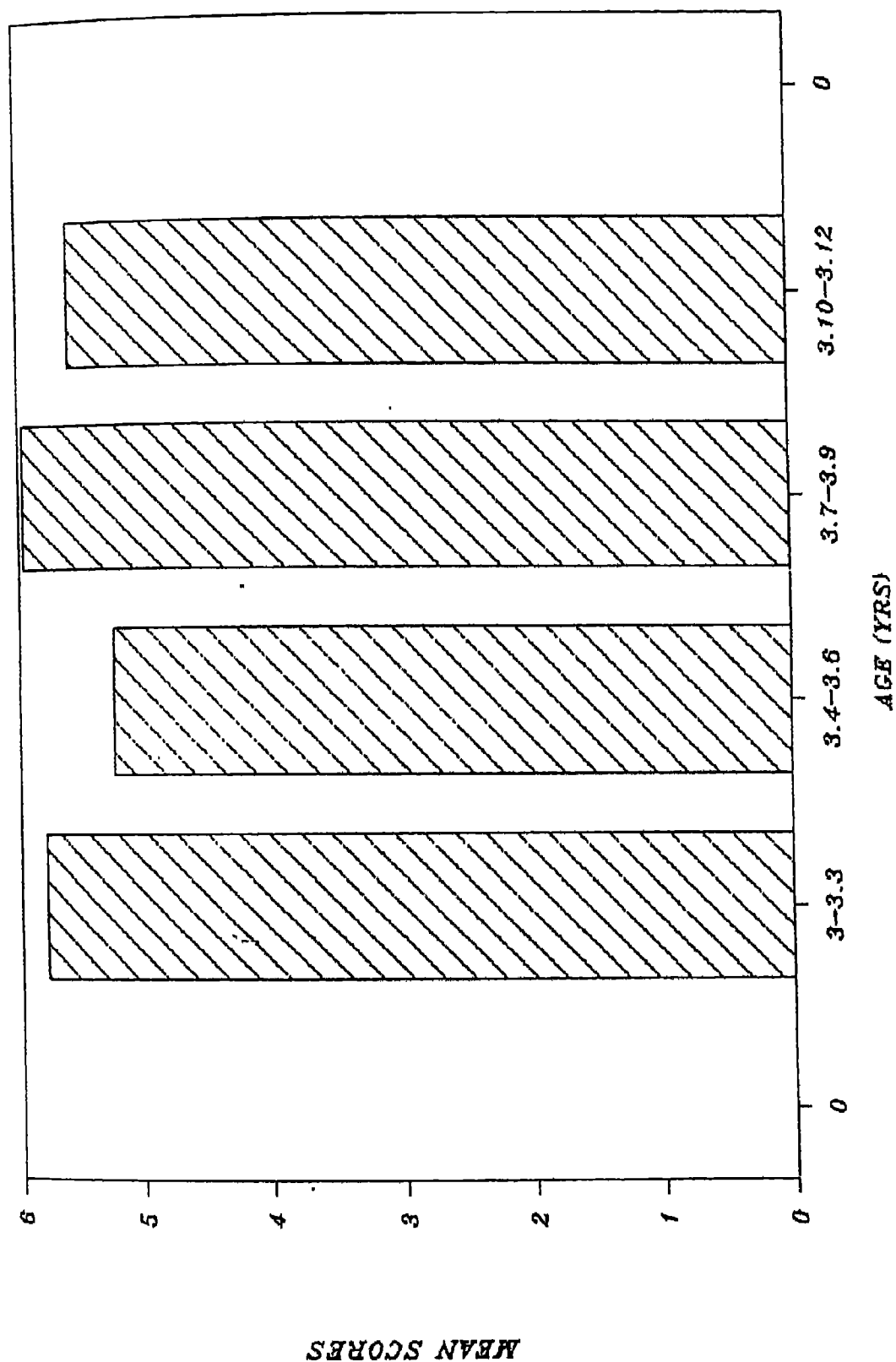
TABLE 4.15(b)

RELEVANT STATISTICS OF COMPREHENSION OF ENGLISH LANGUAGE SCORES FOR THE DIFFERENT AGE GROUPS

Group Yrs.	Mean	Median	Mode	SD	SK	Kur
1. 3.00-3.03	5.78	6.04	6.56	2.77	-0.281	0.296
2. 3.04-3.06	5.21	5.52	5.55	1.82	-0.181	0.215
3. 3.07-3.09	5.96	6.17	6.60	2.24	-0.281	0.262
4. 3.10-3.12	5.56	5.70	6.00	1.95	-0.215	0.272

The comprehension of English language scores are almost normally distributed for the different age groups. All the four distributions are negatively skewed. Excepting group 2 and 3 which are leptokurtic in nature the remaining two groups are platykurtic in nature.

TABLE 4.15 (c)

FIDUCIARY LIMITS OF MEAN & SD OF COMPREHENSION OF ENGLISH LANGUAGE SCORES FOR THE DIFFERENT AGE GROUPS

Group Yrs.	SEM	.95		.99	
1. 3.00-3.03	0.39	5.01	- 6.56	4.76	- 6.80
2. 3.04-3.06	0.19	4.83	- 5.58	4.71	- 5.70
3. 3.07-3.09	0.21	5.53	- 6.39	5.39	- 6.52
4. 3.10-3.12	0.24	5.08	- 6.03	4.93	- 6.18

TABLE 4.15 (c) - Contd.

Group Yrs.	SE OF SD	.95	.99
1. 3.00-3.03	0.28	2.21 - 3.32	2.04 - 3.49
2. 3.04-3.06	0.15	1.55 - 2.09	1.47 - 2.18
3. 3.07-3.09	0.19	1.93 - 2.54	1.83 - 2.64
4. 3.10-3.12	0.1.	1.61 - 2.28	1.50 - 2.39

The Fiduciary limits of Means and SDs of English Language scores at .95 and .99 levels for the different age groups do not have very wide ranges, thus indicating that the statistics are dependable as true measures.

ACADEMIC ACHIEVEMENT

TABLE 4.16(a)

DISTRIBUTION OF ACADEMIC ACHIEVEMENT

SCORES FOR THE TOTAL SAMPLE

Scores	F	SMF
51 - 75	6	10.00
76 - 100	24	16.00
101 - 125	18	23.67
126 - 150	29	25.67
151 - 175	30	35.67
176 - 200	48	38.67
201 - 225	38	41.67
226 - 250	39	41.00
251 - 275	46	38.33
276 - 300	30	25.33
TOTAL :	308	

Figure 4.16 gives the original and smoothed frequency polygons of Academic Achievement scores for the total sample.

A.A. OF THE TOTAL SAMPLE

Fig. 4.16

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES
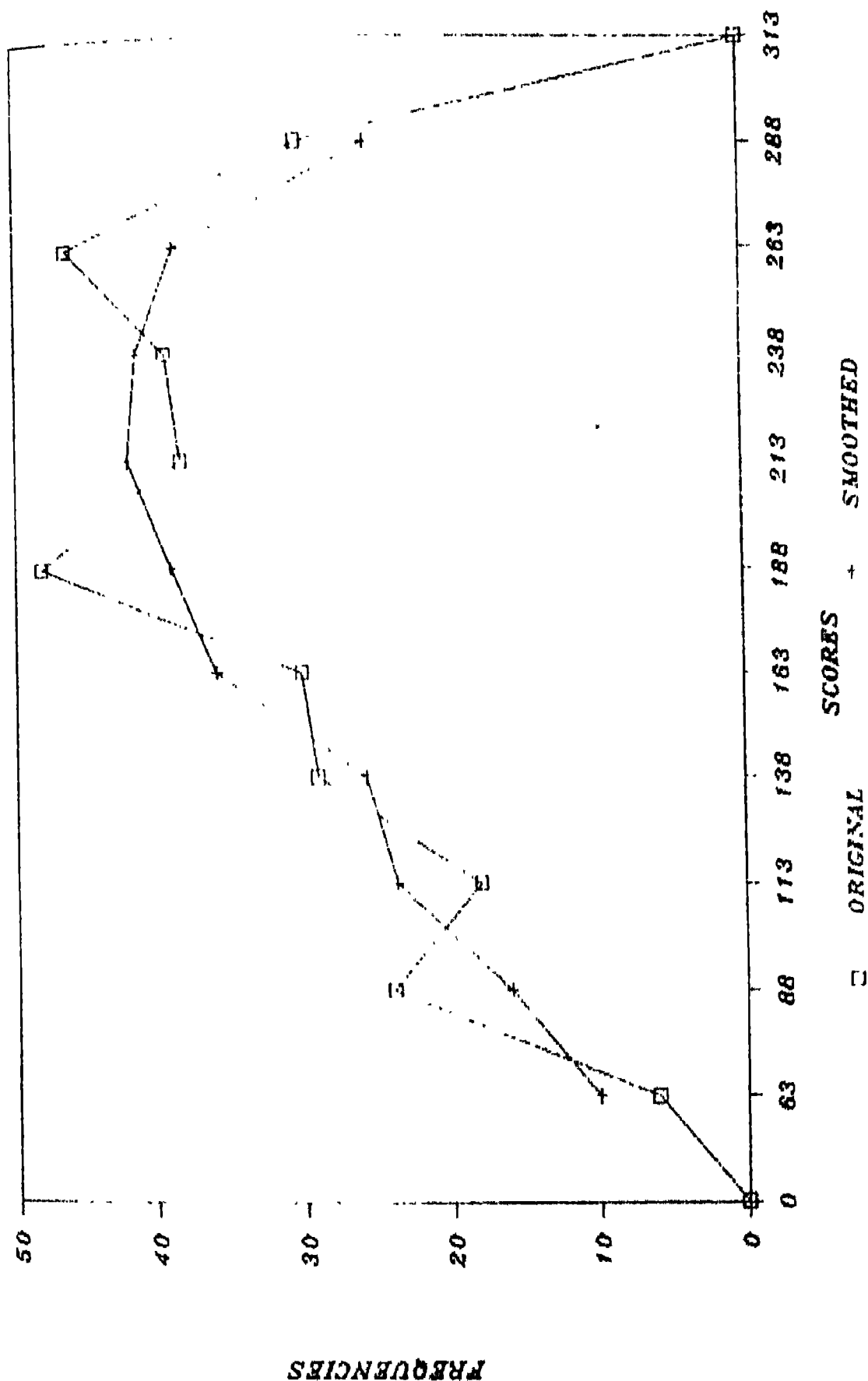
TABLE 4.16 (b)

RELEVANT STATISTICS OF ACADEMIC ACHIEVEMENT SCORES
FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	196.60	199.98	206.73	61.99	-0.163	0.286

The distribution of Academic Achievement scores among the total sample is near normal. The skewness of the distribution is negative and is platykurtic in nature.

TABLE 4.16 (c)

FIDUCIARY LIMITS OF MEAN & SD OF ACADEMIC ACHIEVEMENT
SCORES FOR THE TOTAL SAMPLES

Statistic	SE	.95	.99
Mean	3.53	189.68 - 203.52	187.49 - 205.71
SD	2.50	57.07 - 66.90	55.51 - 68.45

The .95 and .99 confidence limits for the Means and SDs of Academic Achievement scores do not exhibit a very wide range. This supports the normality of the distribution.

ACADEMIC ACHIEVEMENT AND SEX

TABLE 4.17 (a)

DISTRIBUTION OF A.A. SCORES

FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
51 - 75	2.01	1.83
76 - 100	7.04	9.17
101 - 125	6.53	4.59
126 - 150	9.55	9.17
151 - 175	9.55	10.09
176 - 200	16.08	14.68
201 - 225	12.56	11.93
226 - 250	12.56	12.84
251 - 275	14.57	15.60
276 - 300	9.55	10.09

Figure 4.17 depicts the distribution of Academic Achievement scores for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

A.A. OF BOYS AND GIRLS

Fig. 4.17

□ BOYS   + GIRLS

SCORES

FREQUENCIES (%)
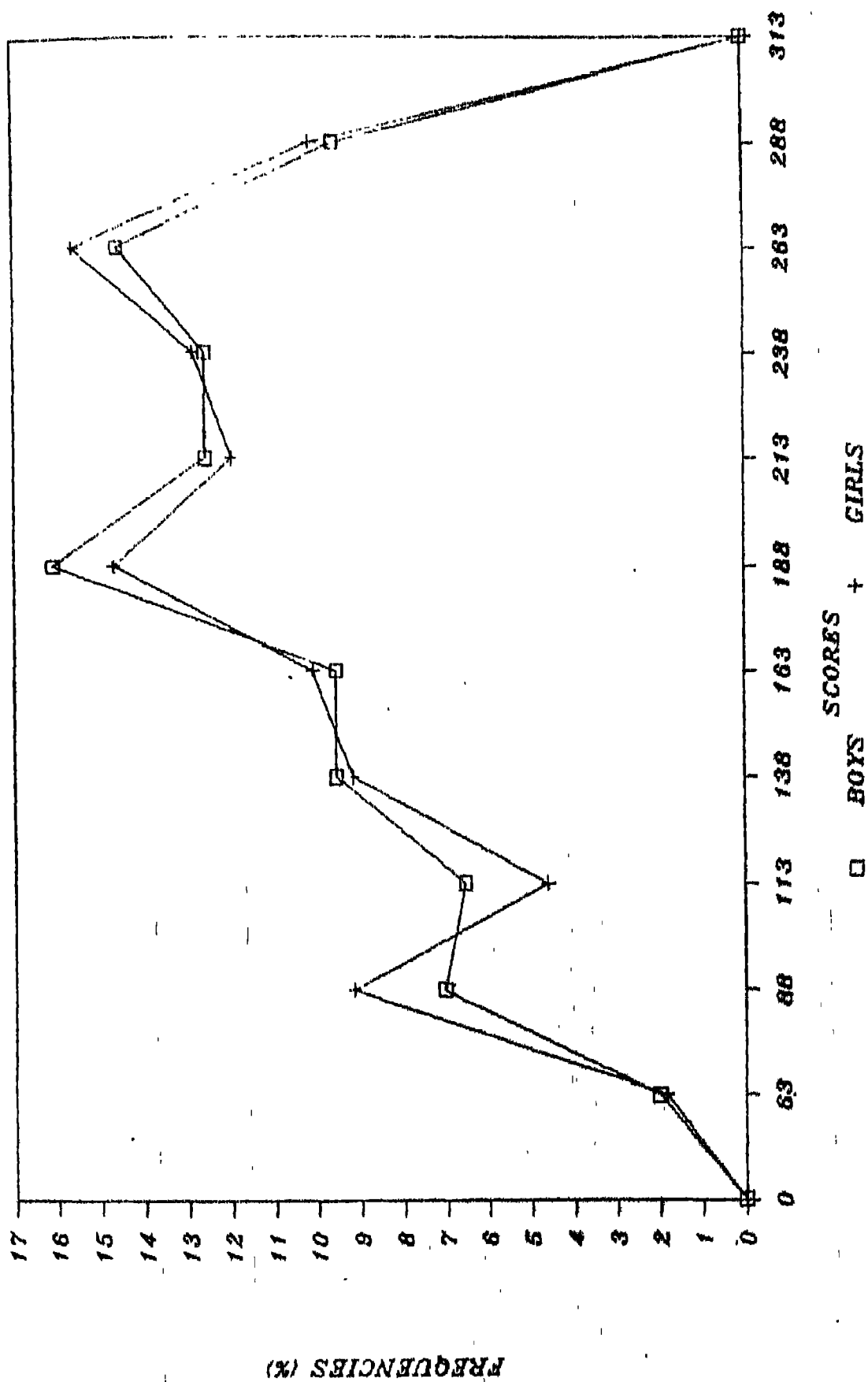
TABLE 4.17 (b)

RELEVANT STATISTICS OF A.A. SCORES

FOR BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	196.29	199.33	205.40	61.50	-0.148	0.289
Girls	197.17	201.46	210.04	62.87	-0.205	0.282

The distribution of Academic Achievement scores among boys and girls for the total sample seems to be almost normal. The distributions are negatively skewed and are platykurtic in nature.

TABLE 4.17(c)

FIDUCIARY LIMITS OF M & SD OF A.A.

SCORES OF BOYS AND GIRLS

Group	SEM	.95	.99
Boys	4.36	187.74 - 204.84	185.04 - 207.54
Girls	6.02	185.37 - 208.98	181.64 - 212.71
	SE of SD		
Boys	3.10	55.43 - 67.56	53.51 - 69.48
Girls	4.28	54.49 - 71.25	51.84 - 73.90

The .95 and .99 confidence intervals for the Means and SDs of both the groups are comparatively not very wide which indicates the high dependability of sample statistics.

ACADEMIC ACHIEVEMENT IN FIRST UNIT TEST

TABLE 4.18(a)

DISTRIBUTION OF ACADEMIC ACHIEVEMENT SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
51 - 75	11	17.33
76 - 100	41	28.33
101 - 125	33	37.00
126 - 150	37	35.00
151 - 175	35	41.00
176 - 200	51	40.67
201 - 225	36	38.00
226 - 250	27	29.33
251 - 275	25	21.33
276 - 300	12	12.33
	308	

Figure 4.18 gives the original and smoothed frequency polygons of Academic Achievement scores obtained in the First Unit Test for the total sample.

A.A. (AT 1st U.T.) OF THE TOTAL SAMPLE   Fig 4.18
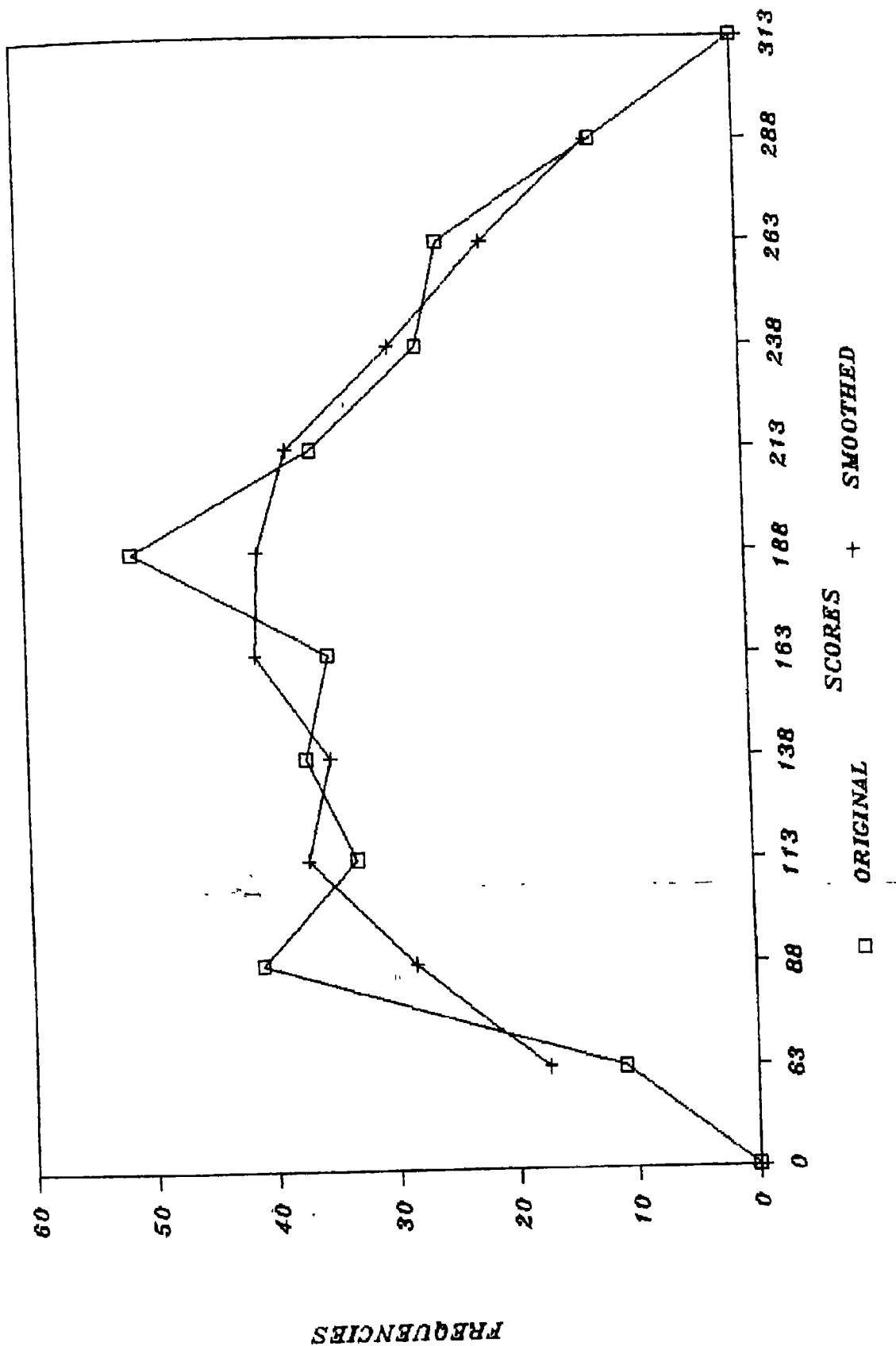
TABLE 4.18(b)

RELEVANT STATISTICS OF ACADEMIC ACHIEVEMENT SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	170.63	173.36	178.81	60.83	-0.134	0.286

The Academic Achievement scores in the First Unit Test for the total sample seems to be distributed normally. The Distribution is negatively skewed and is platykurtic in nature.

TABLE 4.18 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.A. SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

Statistic	S.E.	.95		.99	
Mean	3.46	163.83 –	177.42	161.68 –	179.57
SD	2.46	56.00 –	65.65	54.47 –	67.17

The .95 and .99 confidence limits for the Means and SDs of Academic Achievement scores in First Unit Test do not exhibit a very wide range. This supports the normality of the distribution and the significance of the sample statistics.

ACADEMIC ACHIEVEMENT AND SEX IN FIRST UNIT TEST

TABLE 4.19(a)

DISTRIBUTION OF A.A. SCORES OBTAINED IN FIRST UNIT
TEST FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
51 – 75	4.02	2.75
76 – 100	12.06	15.60
101 – 125	11.56	9.17
126 – 150	13.06	10.02
151 – 175	12.56	9.17
176 – 200	15.08	19.27
201 – 225	12.56	10.09
226 – 250	8.04	10.09
251 – 275	7.54	9.17
276 – 300	3.52	4.59

Figure 4.19 depicts the distribution of Academic Achievement scores obtained in First Unit Test for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

A.A. (AT 1st U.T.) OF BOYS AND GIRLS

Fig. 4.19

276

FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS
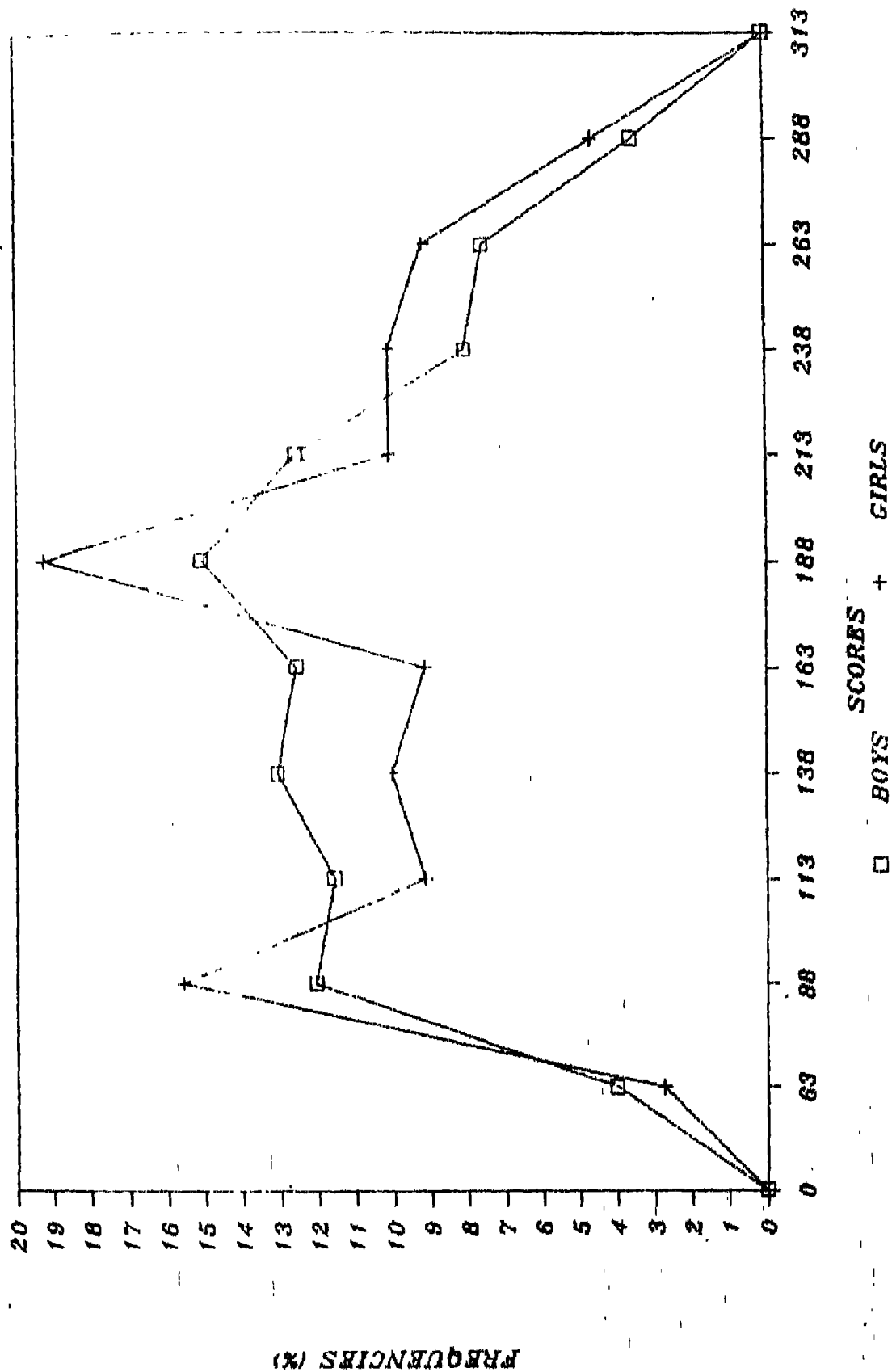
TABLE 4.19 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN FIRST
UNIT TEST FOR BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	168.90	169.00	169.19	59.83	-0.005	0.283
Girls	173.78	179.67	191.44	62.48	-0.283	0.299

The Academic Achievement scores among Boys and
Girls in the first Unit Test is distributed normally in the
total sample. Both the distribution are negatively skewed
and are platykurtic in nature.

TABLE 4.19 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.A. SCORES OBTAINED IN
FIRST UNIT TEST FOR BOYS AND GIRLS

Groups	SEM	.95	.99
Boys	4.24	160.59 - 177.22	157.96 - 179.85
Girls	5.98	162.03 - 185.51	158.34 - 189.22
	SE of SD		
Boys	3.01	53.93 - 65.74	52.06 - 67.60
Girls	4.23	54.13 - 70.80	51.51 - 73.44

The .95 and .99 confidence limits for the Means
and SDs of both the groups do not exhibit very wide ranges
thus indicating the high dependability of the sample
statistics.

ACADEMIC ACHIEVEMENT IN FIRST SEMESTER EXAM

TABLE 4.20(a)

DISTRIBUTION OF A.A. SCORES OBTAINED IN FIRST SEMESTER
EXAM FOR THE TOTAL SAMPLE

Scores	F	SMF
51 - 75	6	12.67
76 - 100	32	20.00
101 - 125	22	29.67
126 - 150	35	32.00
151 - 175	39	41.33
176 - 200	50	40.00
201 - 225	31	40.00
226 - 250	39	35.33
251 - 275	36	31.00
276 - 300	18	18.00
Total	308	

Figure 4.20 gives the original and smoothed
frequency polygons of A.A. scores obtained in first semester
exam for the total sample.

A.A. (AT 1st S.E.) OF THE TOTAL SAMPLE   Fig. 4.2

ORIGINAL □   SMOOTHED +   SCORES

FREQUENCIES
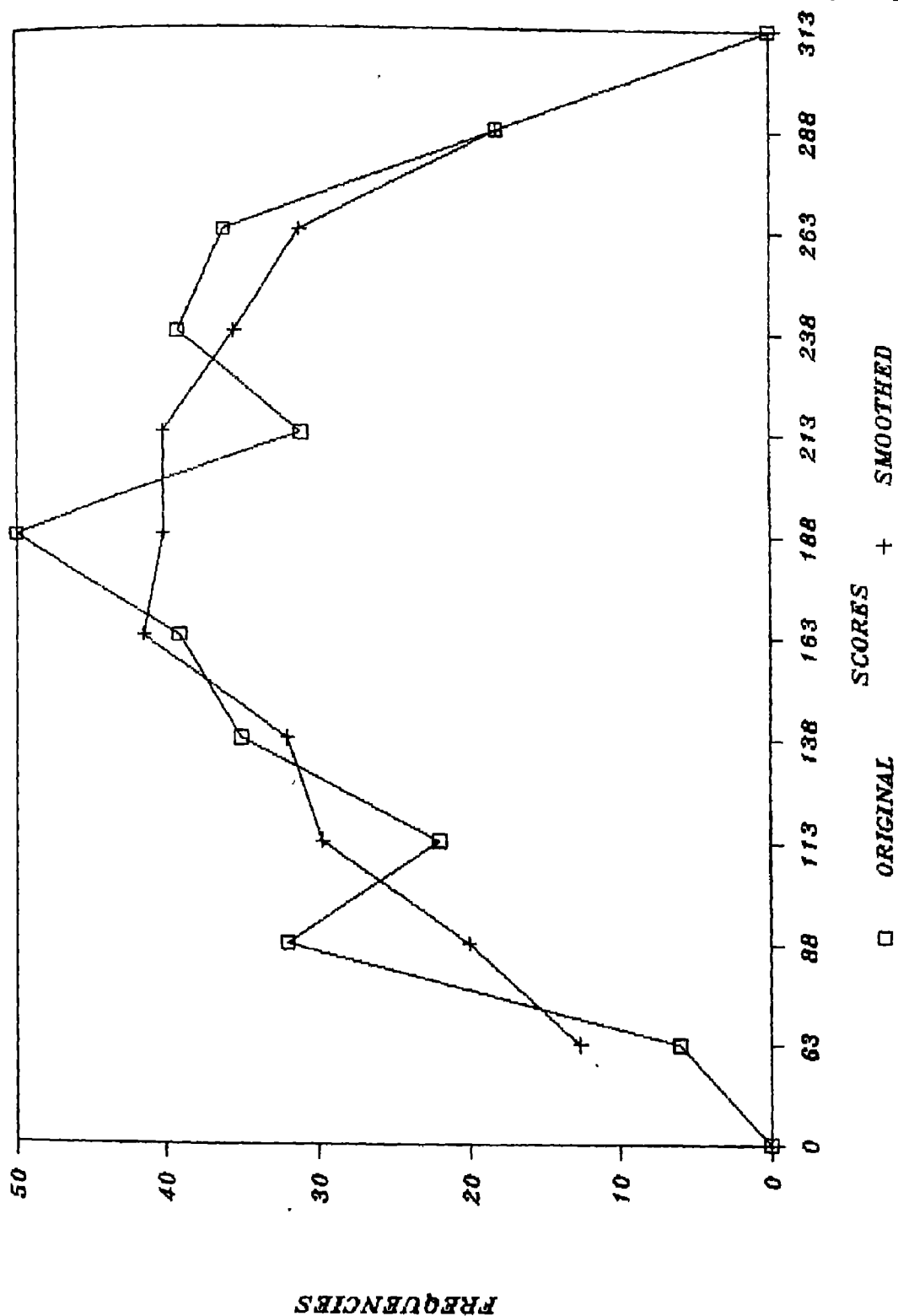
TABLE 4.20 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	184.43	185.5	187.64	60.96	-0.052	0.285

The distribution of Academic Achievement scores for the total sample in First Semester exam is fairly normal. The skewness is negative and the distribution is platykurtic in nature.

TABLE 4.20 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.A. SCORES OBTAINED IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	S.E.	.95	.99
Mean	3.47	177.61 - 191.23	175.46 - 193.39
SD	2.46	56.13 - 65.80	54.60 - 67.33

The .95 & .99 confidence limits for the Means and SDs of Academic Achievement scores in First Semester exam do not have very wide ranges thus implying the dependability of sample statistics as true measures.

ACADEMIC ACHIEVEMENT IN FIRST SEMESTER EXAM AND SEX

TABLE 4.21(a)

DISTRIBUTION OF A.A. SCORES OBTAINED IN FIRST
SEMESTER EXAM FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
51 - 75	2.01	1.83
76 - 100	10.55	10.02
101 - 125	7.54	6.42
126 - 150	11.06	11.93
151 - 175	14.01	10.09
176 - 200	16.58	15.60
201 - 225	9.55	11.01
226 - 250	12.56	12.84
251 - 275	9.55	15.60
276 - 300	6.53	4.59

Figure 4.21 depicts the distribution of Academic
Achievement scores obtained in First Semester Exam for boys
and girls in the form of frequency polygons. The frequencies
are plotted as percentages.

A.A. (AT 1st S.E.) OF BOYS AND GIRLS   Fig. 4.21

FREQUENCIES (%)

□ BOYS   +   GIRLS

SCORES

282
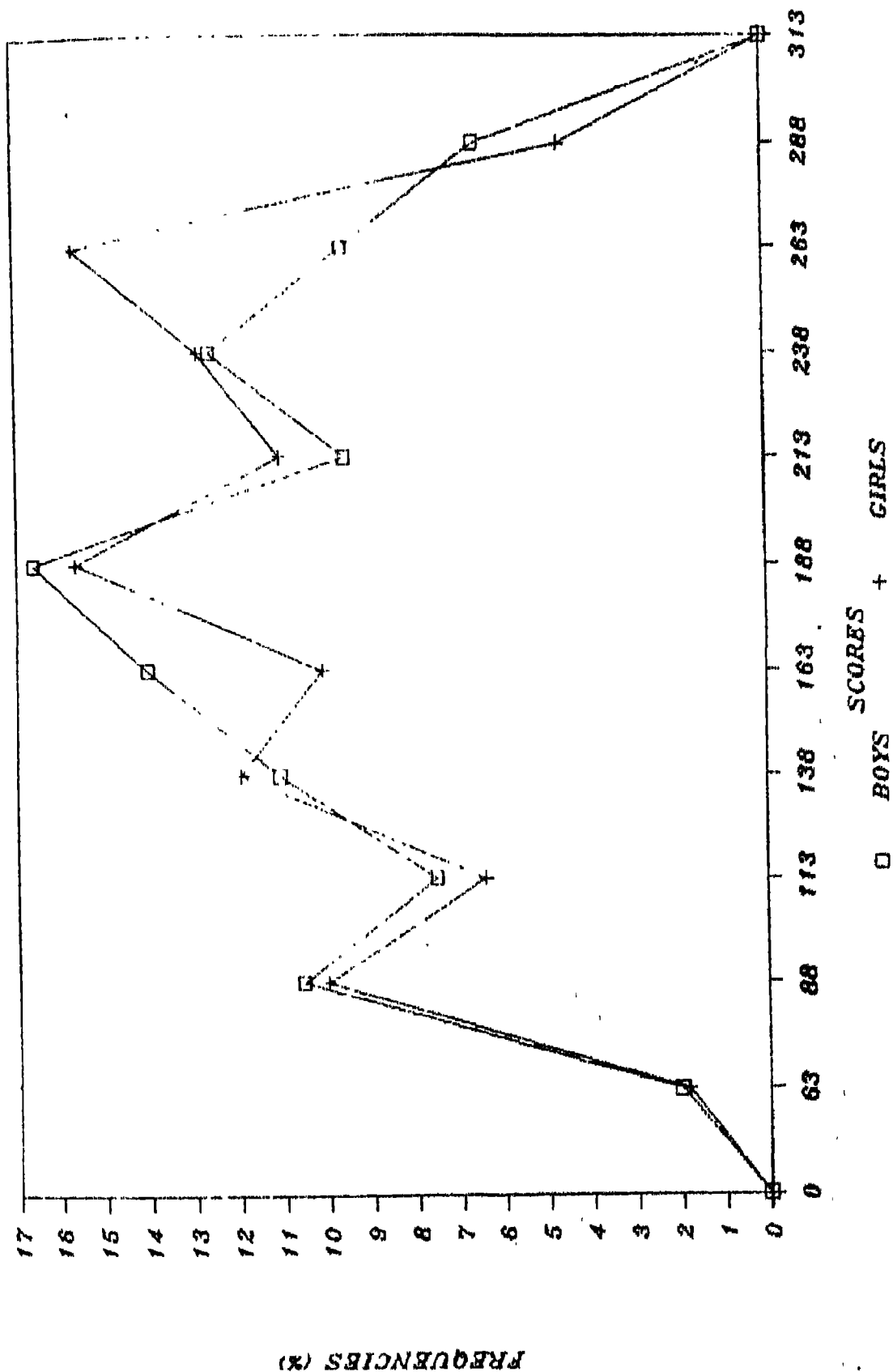
TABLE 4.21 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN
FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Group	Mean	Median	Mode	SD	SK	Kur
Boys	182.60	182.70	182.90	60.77	-0.004	0.280
Girls	187.77	190.94	197.28	61.19	-0.155	0.297

The scores of Academic Achievement in First Semester exam of Boys and Girls seem to be distributed normally among the total sample. The skewness of the distribution is negative and both are platykurtic in nature.

TABLE 4.21 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.A. SCORES OBTAINED IN
FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	4.31	174.16 - 191.04	171.48 - 193.71
Girls	5.86	176.28 - 199.26	172.65 - 202.89
	SE of SD		
Boys	3.06	54.77 - 66.76	52.88 - 68.66
Girls	4.16	53.03 - 69.35	50.45 - 71.93

The .95 and .99 confidence limits for the Means and SDs for both the scores seem to be fairly narrow though for the girls the range is slightly wider compared to the boys.

ACADEMIC ACHIEVEMENT IN SECOND UNIT TEST

TABLE 4.22 (a)

DISTRIBUTION OF A.A. SCORES OBTAINED IN SECOND UNIT TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
51 - 75	4	7.33
76 - 100	18	11.66
101 - 125	13	20.00
126 - 150	29	21.00
151 - 175	21	31.00
176 - 200	43	33.00
201 - 225	37	41.33
226 - 250	44	45.00
251 - 275	54	47.67
276 - 300	45	33.00
TOTAL	308	

Figure 4.22 gives the original and smoothed frequency polygons of A.A. scores obtained in second unit Test for the total sample.

A.A. (AT 2nd U.T.) OF THE TOTAL SAMPLE

Fig 4.2

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES
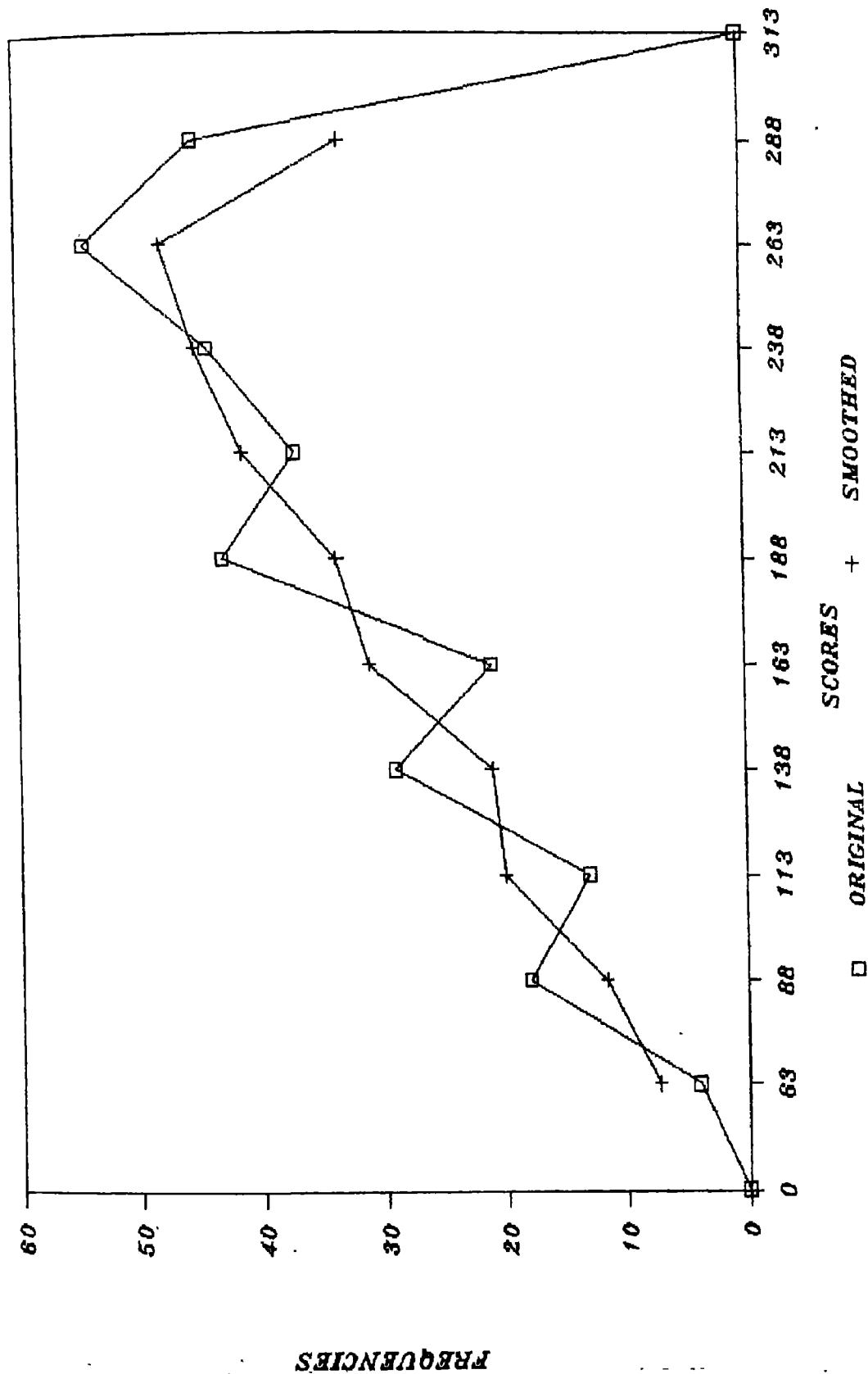
TABLE 4.22 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN SECOND
UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	208.86	218.06	236.48	61.21	-0.451	0.285

The scores of Academic Achievement in Second
Unit Test for the total sample is distributed fairly
normally. The skewness is negative and is platykurtic in
nature.

TABLE 4.22 (c)

FIDUCIARY LIMITS OF M & SD OF A.A. SCORES OBTAINED IN SECOND
UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	3.48	202.02 - 215.69	199.86 - 217.85
SD	2.47	56.35 - 66.06	54.82 - 67.60

The .95 and .99 confidence limits for the Means
and SDs of Academic Achievement scores in Second Unit Test
have very narrow ranges. This implies the dependability of
sample statistics as true measures.

ACADEMIC ACHIEVEMENT AND SEX IN SECOND UNIT TEST

TABLE 4.23 (a)

DISTRIBUTION OF A.A. SCORES OBTAINED IN SECOND

UNIT TEST FOR BOYS AND GIRLS

Scores		Boys F %	Girls F %
51	75	1.31	0.92
76	100	6.03	5.50
101	125	4.52	3.67
126	150	9.05	10.09
151	175	6.53	8.26
176	200	14.07	12.84
201	225	12.56	11.01
226	250	14.07	14.68
251	275	18.59	15.60
276	300	12.56	17.43

Figure 4.23 depicts the distribution of Academic Achievement scores obtained in Second Unit Test for Boys and Girls in the form of frequency polygons. The frequencies are plotted as percentages.

A.A. (AT 2nd U.T.) OF BOYS AND GIRLS

Fig. 4.28

FREQUENCIES (%)

BOYS SCORES + GIRLS

□ BOYS + GIRLS

288
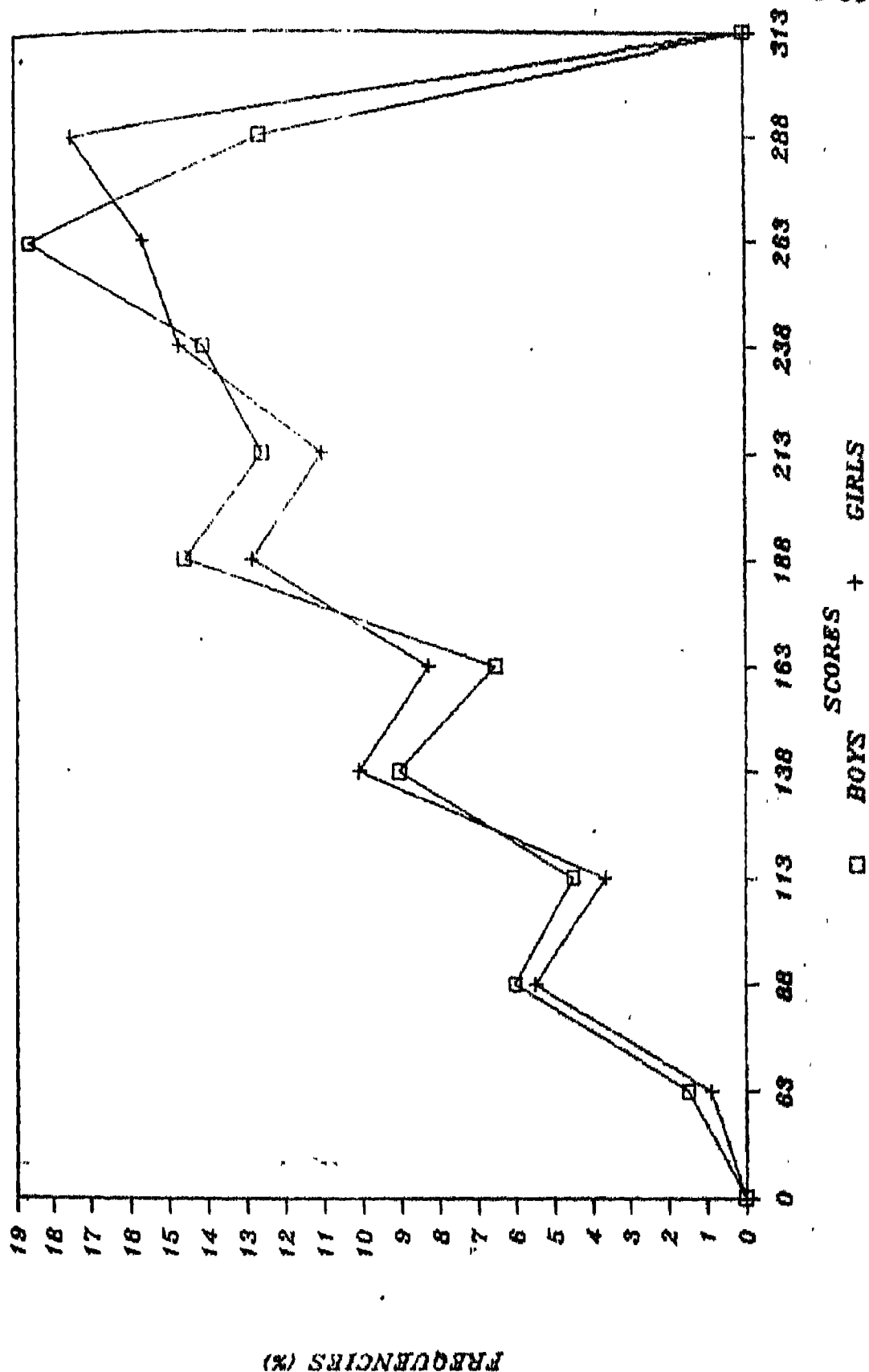
TABLE 4.23 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN SECOND
UNIT TEST FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	207.22	216.00	233.56	61.01	-0.432	0.280
Girls	210.71	220.29	239.46	61.19	-0.470	0.305

The A.A. scores in second unit test for both scores seems to be distributed normally. Both are negatively skewed and are platykurtic in nature.

TABLE 4.23 (c)

FIDUCIARY LIMITS OF M & SD OF A.A. SCORES OBTAINED IN
SECOND UNIT TEST FOR BOYS AND GIRLS

Groups	SEM	.95	.99
Boys	4.33	198.74 - 215.70	196.06 - 218.38
Girls	5.86	199.22 - 222.19	195.58 - 225.83
	SE of SD		
Boys	3.07	54.99 - 67.03	53.09 - 68.94
Girls	4.16	53.04 - 69.35	50.46 - 71.93

The .95 and .99 confidence limits for the Means and SDs of boys and girls are comparatively narrow which indicates the dependability of sample statistics.

ACADEMIC ACHIEVEMENT IN SECOND SEMESTER EXAM

TABLE 4.24 (a)

DISTRIBUTION OF A.A. SCORES OBTAINED IN SECOND
SEMESTER EXAM FOR THE TOTAL SAMPLE

Scores	F	SMF
51 – 75	3	3.00
76 – 100	6	5.00
101 – 125	6	8.67
126 – 150	14	14.33
151 – 175	23	27.33
176 – 200	45	39.00
201 – 225	49	47.00
226 – 250	47	55.00
251 – 275	69	54.00
276 – 300	46	38.33
TOTAL	308	

Figure 4.24 gives the original and smoothed
frequency polygons of A.A. scores obtained in Second Semester
exam for the total sample.

A.A. (AT 2nd S.E.) OF THE TOTAL SAMPLE   Fig. 4.24

□ ORIGINAL   + SMOOTHED   SCORES
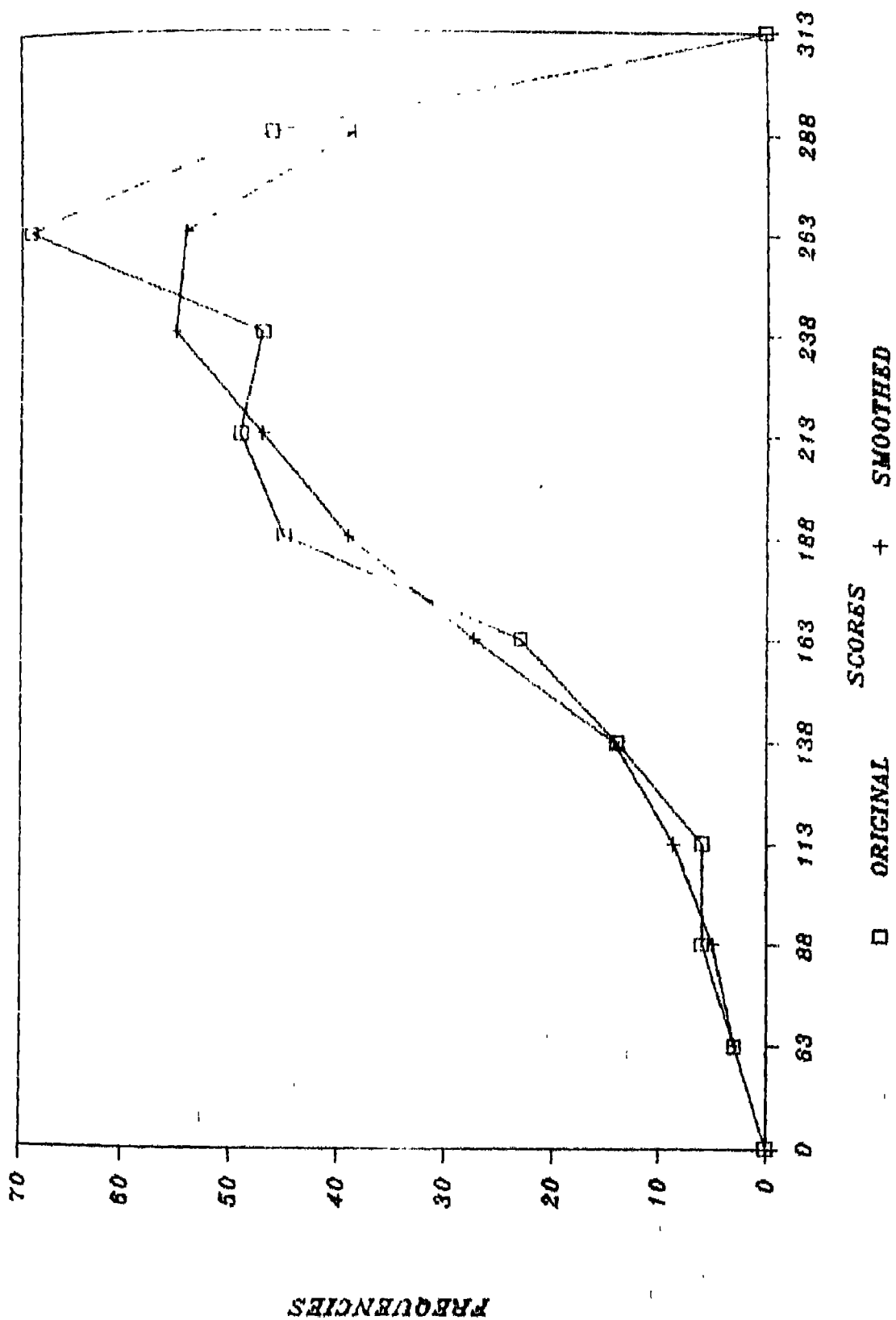
TABLE 4.24 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN SECOND
SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	222.57	229.75	244.11	51.53	-0.418	0.285

The distribution of Academic Achievement scores
for the total sample in Second Semester Exam is almost
normal. The distribution is negatively skewed and is
platykurtic in nature.

TABLE 4.24 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.A. SCORES OBTAINED IN
SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	2.93	216.82 - 228.33	215.00 - 230.15
SD	2.08	47.44 - 55.62	46.15 - 56.91

The .95 and .99 confidence limits for the Means
and SDs of Academic Achievement scores in Second Semester
Exam have narrow ranges implying the dependability of the
sample statistics.

ACADEMIC ACHIEVEMENT AND SEX IN SECOND SEMESTER EXAM

TABLE 4.25 (a)

DISTRIBUTION OF A.A.. SCORES OBTAINED IN SECOND SEMESTER EXAM
FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
51 - 75	1.51	0
76 - 100	1.51	2.75
101 - 125	2.01	1.83
126 - 150	4.52	4.59
151 - 175	7.04	8.26
176 - 200	16.08	11.93
201 - 225	15.58	16.51
226 - 250	14.57	16.51
251 - 275	22.11	22.94
276 - 300	15.08	14.68

Figure 4.25 depicts the distribution of A.A.
scores obtained in Second Semester Exam for boys and girls in
the form of frequency polygons. The frequencies are plotted
as percentages.

A.A. (AT 2nd S.E.) OF BOYS AND GIRLS Fig. 4.25.


FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS
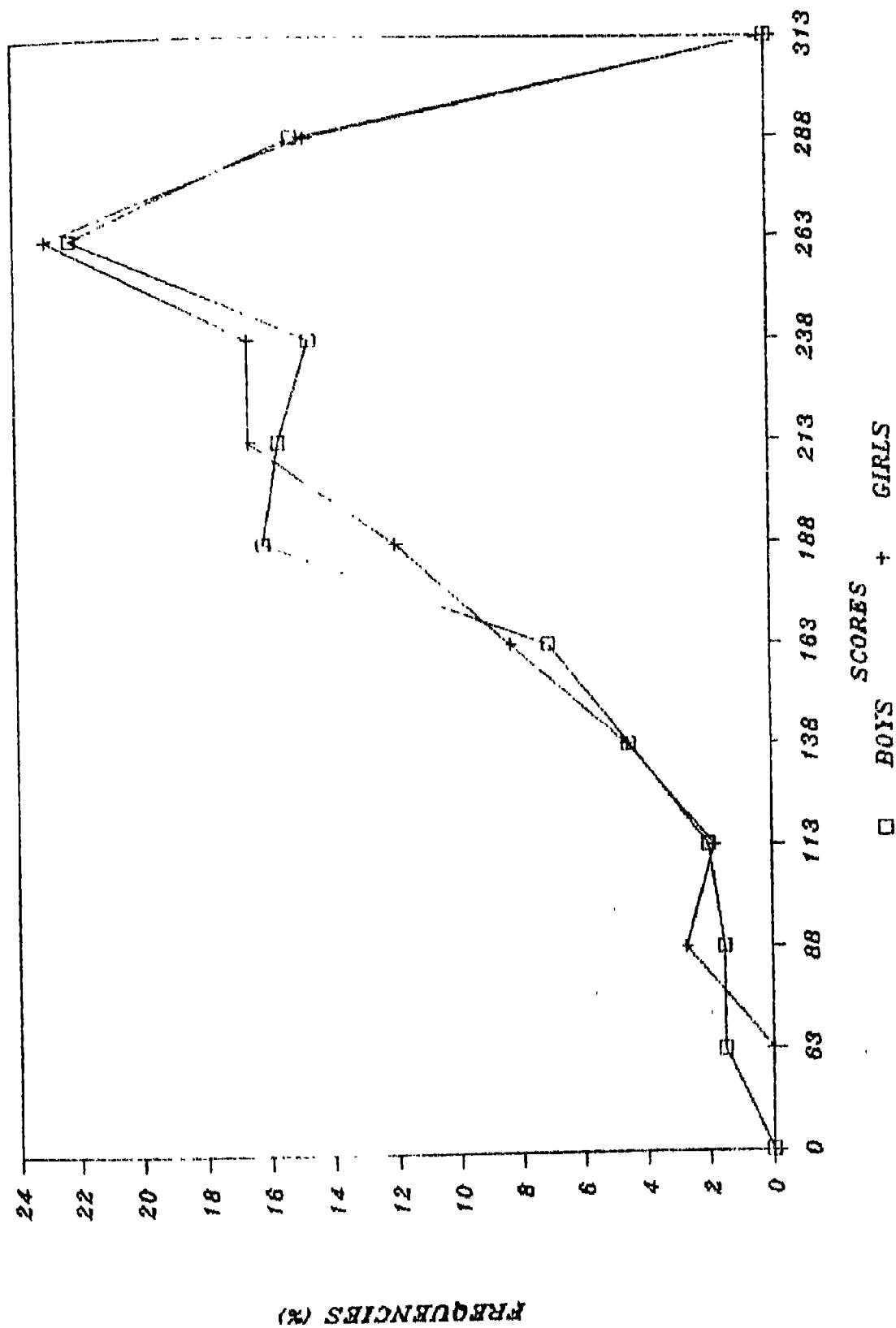
TABLE 4.25 (b)

RELEVANT STATISTICS OF A.A. SCORES OBTAINED IN SECOND
SEMESTER EXAM FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	221.92	228.52	241.71	52.14	-0.380	0.287
Girls	223.78	251.75	247.69	50.38	-0.473	0.279

The distribution of Academic Achievement scores among boys and girls are almost normal. Both have negative skewness and their variability too are comparable, and both are also platykurtic.

TABLE 4.25 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.A. SCORES OBTAINED IN
SECOND SEMESTER EXAM FOR BOYS AND GIRLS

Groups	SEM	.95	.99
Boys	3.70	214.67 - 229.16	212.38 - 231.46
Girls	4.83	214.32 - 233.24	211.33 - 236.23
	SE of SD		
Boys	2.62	47.10 - 57.29	45.37 - 58.91
Girls	3.43	43.67 - 57.10	41.54 - 59.22

The .95 and .99 confidence limits for both the sexes in Second Semester Exam have fairly narrow ranges.

LANGUAGE

TABLE 4.26 (a)

DISTRIBUTION OF LANGUAGE SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	2	2.00
11 - 20	4	7.33
21 - 30	16	13.67
31 - 40	21	25.00
41 - 50	38	32.67
51 - 60	39	42.33
61 - 70	50	41.00
71 - 80	34	49.00
81 - 90	63	46.00
91 - 100	41	34.67
Total	308	

Figure 4.26 gives the original and smoothed frequency polygons of language scores for the total sample.

Fig. 4.26.

L.S. OF THE TOTAL SAMPLE.

FREQUENCIES

ORIGINAL SCORES SMOOTHED

□ ORIGINAL + SMOOTHED
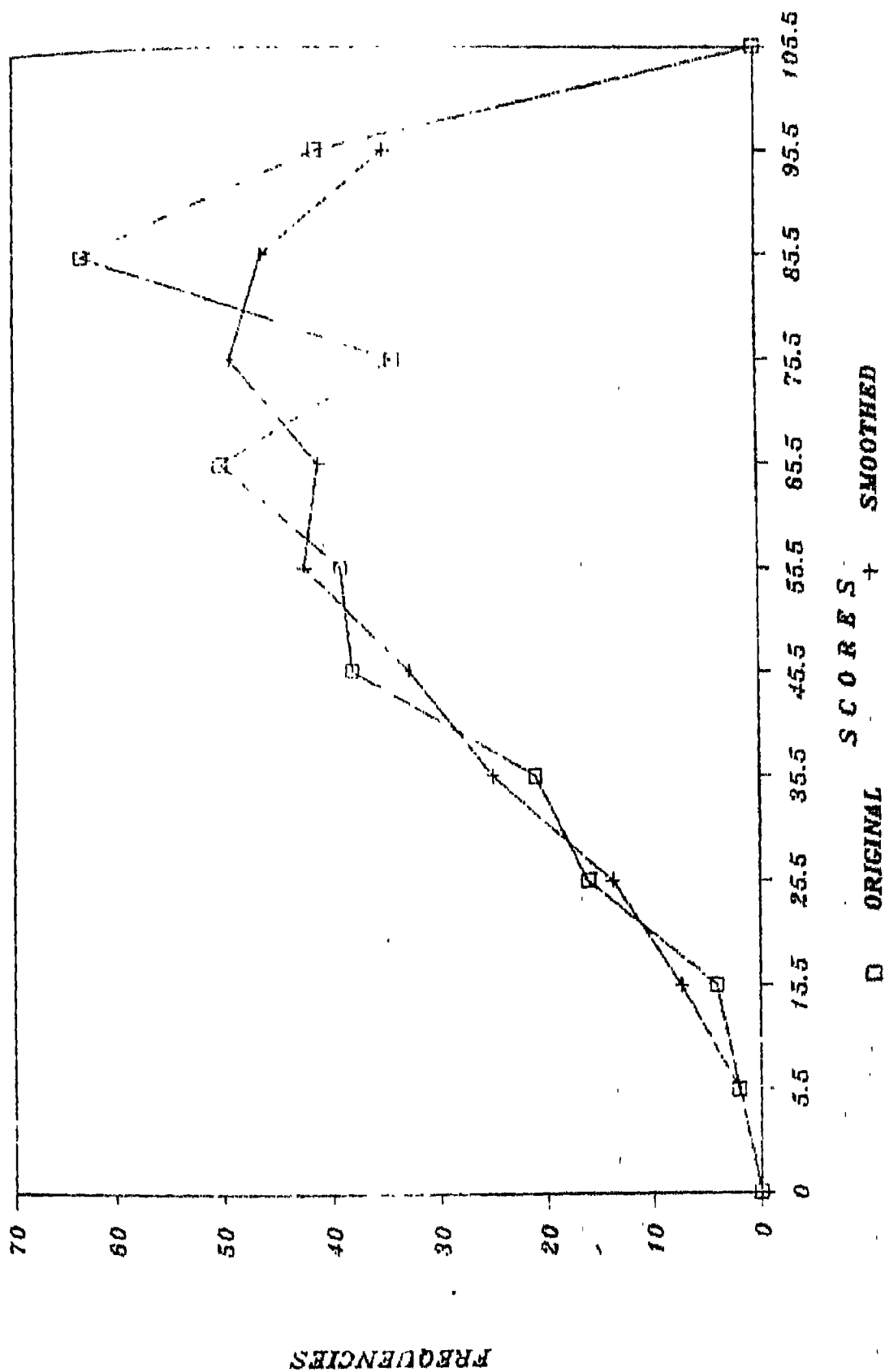
TABLE 4.26 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	65.79	67.3	70.31	21.79	-0.207	0.303

The distribution of language scores among the total sample of children is near normal. The skewness of the distribution is negative and is platykurtic in nature.

TABLE 4.26 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE

SCORES FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.24	63.35 - 68.22	62.58 - 68.99
SD	0.88	20.06 - 23.52	19.51 - 24.06

The .95 and .99 fiduciary intervals of means and SDs of language scores for the total sample do not vary broadly in their ranges, denoting that the sample statistics are almost dependable.

LANGUAGE AND SEX

TABLE 4.27 (a)

DISTRIBUTION OF LANGUAGE SCORES FOR BOYS AND GIRLS

IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0.50	0.90
11 - 20	1.50	0.90
21 - 30	5.02	5.50
31 - 40	7.33	5.50
41 - 50	13.06	11.00
51 - 60	12.56	12.84
61 - 70	17.58	13.76
71 - 80	11.05	11.00
81 - 90	20.60	20.18
91 - 100	10.55	18.34

Figure 4.27 depicts the distribution of Language Scores for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

L.S. OF BOYS AND GIRLS

Fig.4.27

300

□ BOYS + GIRLS

SCORES

FREQUENCIES %
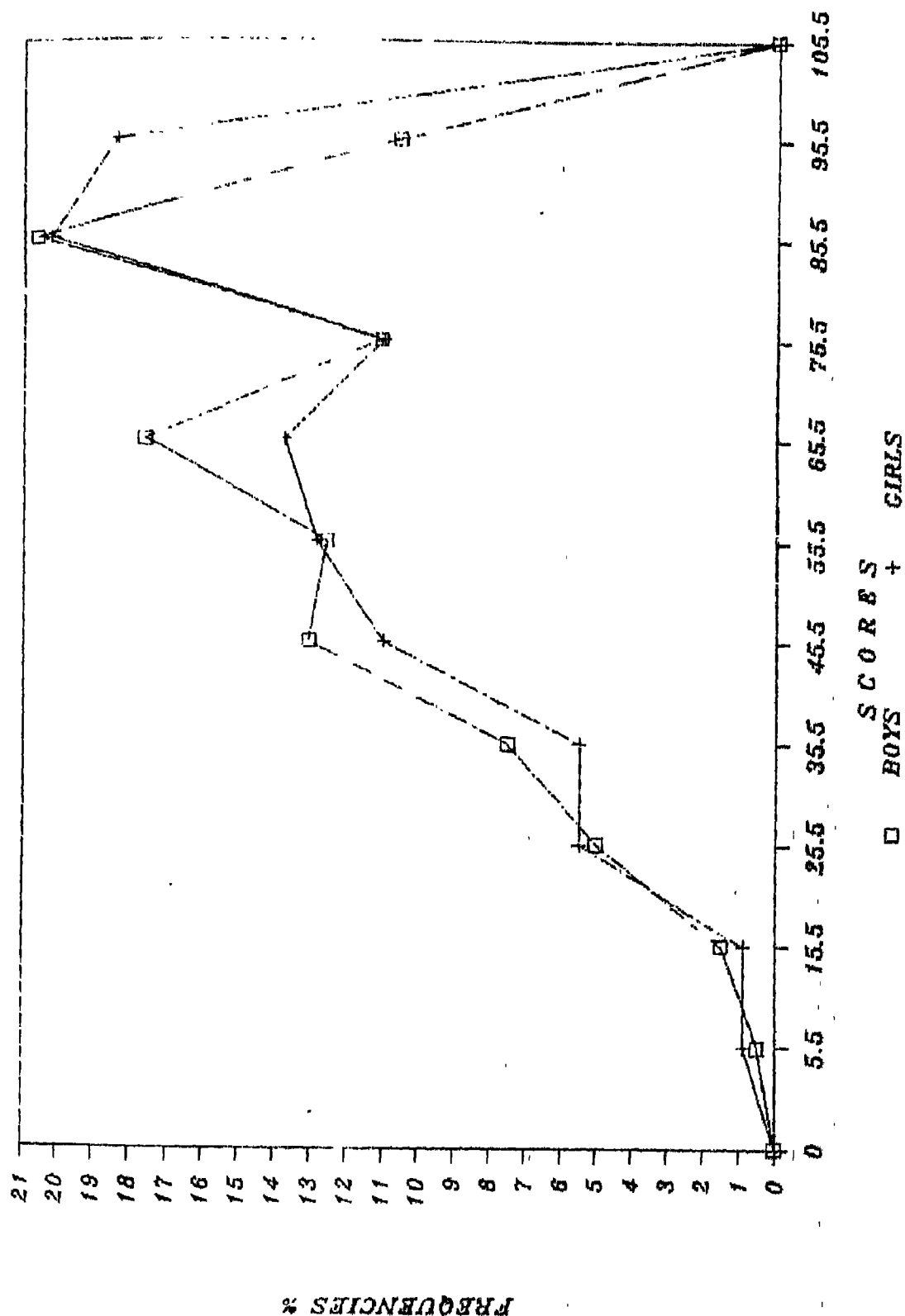
TABLE 4.27(b)

RELEVANT STATISTICS OF SEX-WISE DISTRIBUTION OF LANGUAGE

SCORES FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	64.69	66.07	68.82	21.36	-0.193	0.309
Girls	67.79	70.16	74.91	22.40	-0.317	0.299

The distribution of language scores among the boys and girls are almost normally distributed. Both the distributions are negatively skewed and are platykurtic in nature.

TABLE 4.27 (c)

FIDUCIARY LIMITS OF M & SD OF LANGUAGE

SCORES FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.51	61.72 - 67.66		60.78 - 68.60	
Girls	2.14	63.58 - 72.00		62.25 - 73.33	
	SE of SD				
Boys	1.07	19.26 - 23.47		18.59 - 24.14	
Girls	1.52	19.47 - 25.39		18.47 - 26.33	

The .95 and .99 confidence limits of Means and SDs of language scores for boys and girls have fairly narrow ranges, thus implying that the sample statistics are almost dependable.

LANGUAGE IN FIRST UNIT TEST

TABLE 4.28 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	6	5.00
11 - 20	9	14.00
21 - 30	27	23.67
31 - 40	35	39.33
41 - 50	56	47.33
51 - 60	51	47.00
61 - 70	34	36.33
71 - 80	24	35.00
81 - 90	47	30.00
91 - 100	19	22.00
Total	308	

Figure 4.28 gives the original and smoothed frequency polygons of language scores obtained in first unit test for the total sample.

Fig 4.28

L.S.(AT 1st U.T.) OF THE TOTAL SAMPLE

ORIGINAL SCORES   + SMOOTHED   □ ORIGINAL
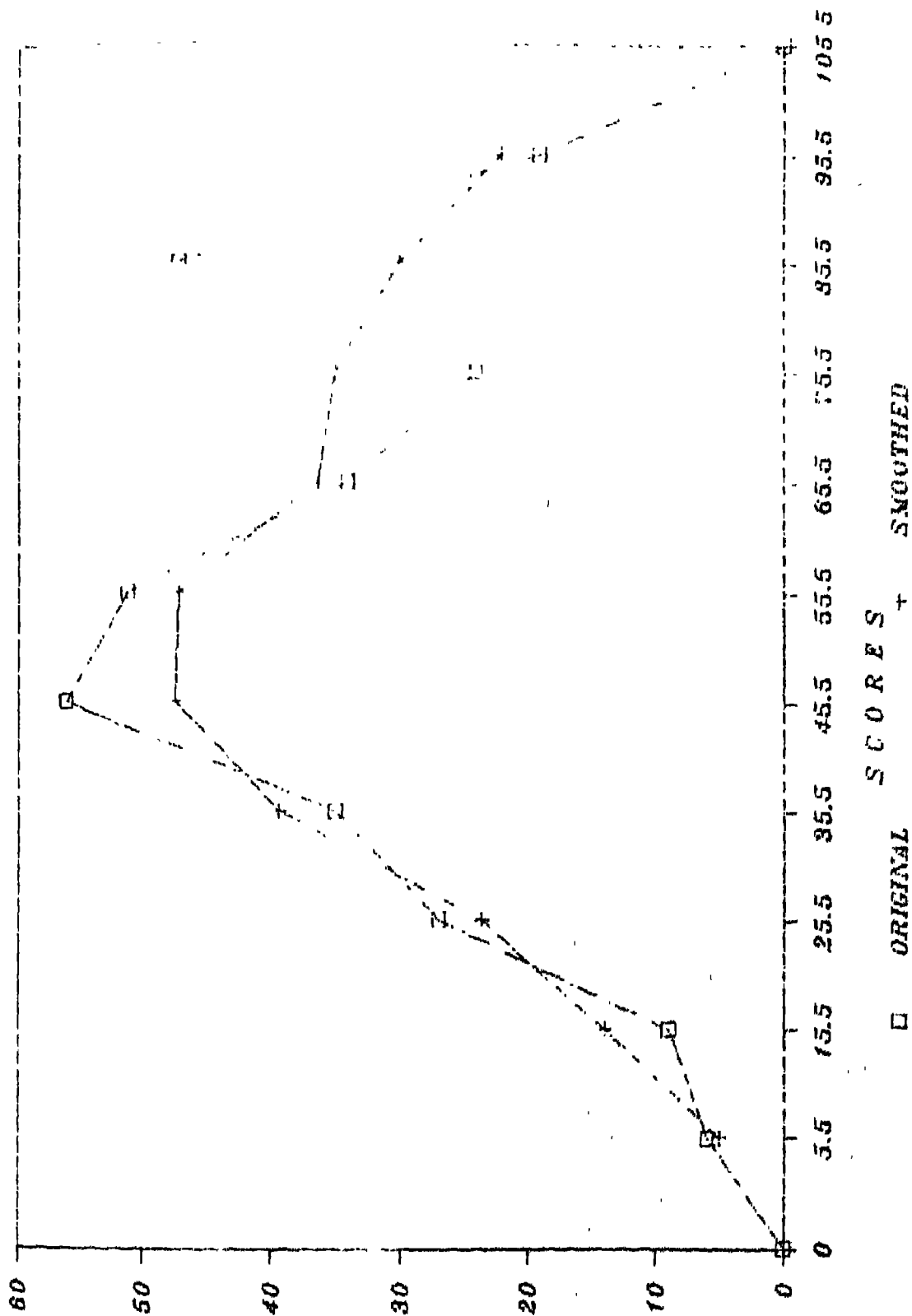
TABLE 4.28 (b)

RELEVANT STATISTICS O LANGUAGE SCORES OBTAINED IN FIRST
UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	56.34	54.61	51.16	22.70	0.228	0.287

The distribution of language scores for the total sample in first unit test is normally distributed with a slight variability. The curve of the distribution is positively skewed and is platykurtic in nature.

TABLE 4.28 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED
IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.29	53.80 - 58.87	53.00 - 59.68
SD	0.91	20.90 - 24.50	20.33 - 25.07

The .95 and .99 confidence limits for the Means and SDs of Language scores in first unit test do not vary widely. This indicates a fairly high degree of significance of the sample statistics.

LANGUAGE AND SEX IN FIRST UNIT TEST

TABLE 4.29 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN FIRST UNIT TEST
FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	2.01	1.83
11 - 20	3.01	2.75
21 - 30	0.04	10.09
31 - 40	13.56	7.33
41 - 50	17.08	20.18
51 - 60	16.08	17.43
61 - 70	11.55	10.09
71 - 80	7.53	8.25
81 - 90	15.57	14.67
91 - 100	5.52	'.53

Figure 4.29 depicts the distribution of language scores obtained in first unit test for boys and girls in th. form of frequency polygons. The frequencies are plotted as percentages.

L.S.(AT 1st U.T.) OF BOYS AND GIRLS Fig.4.29.

FREQUENCIES %

SCORES   + GIRLS   □ BOYS

TABLE 4.29 (h)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN FIRST

UNIT TEST FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	kur
Boys	56.00	54.40	51.21	22.63	0.212	0.295
Girls	56.96	54.97	50.98	22.82	0.262	0.277

The distributions of language scores among boys and girls in first Unit Test are almost normal with equal degree of variability. The distributions are positively skewed and are platykurtic.

TABLE 4.29 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED IN

FIRST UNIT TEST FOR BOYS AND GIRLS

Group	SEM		.95		.99
Boys	1.60	52.85 - 59.14		51.86 - 60.14	
Girls	2.18	52.68 - 61.25		51.32 - 62.60	
	SE of SD				
Boys	1.13	20.40 - 24.06		19.69 - 25.33	
Girls	1.55	19.77 - 25.86		18.81 - 26.82	

From the entries in table 4.29(c) it is clear that language scores for boys and girls in First Unit Test are almost normally distributed in the sample. The .95 and .99 confidence limits for language scores in first unit test do not differ widely in their ranges implying the high degree of significance of statistics.

LANGUAGE IN FIRST SEMESTER EXAM

TABLE 4.30 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	2	2.33
11 - 20	5	8.33
21 - 30	18	17.00
31 - 40	28	31.67
41 - 50	49	45.67
51 - 60	60	51.00
61 - 70	44	39.67
71 - 80	15	36.33
81 - 90	50	34.00
91 - 100	37	29.00
TOTAL	308	

Figure 4.30 gives the original and smoothed frequency polygons of Language scores obtained in first Semester Exam for the total sample.

L.S.(AT 1st S.E.) OF THE TOTAL SAMPLE Fig. 4.30.

309

ORIGINAL SCORES SMOOTHED
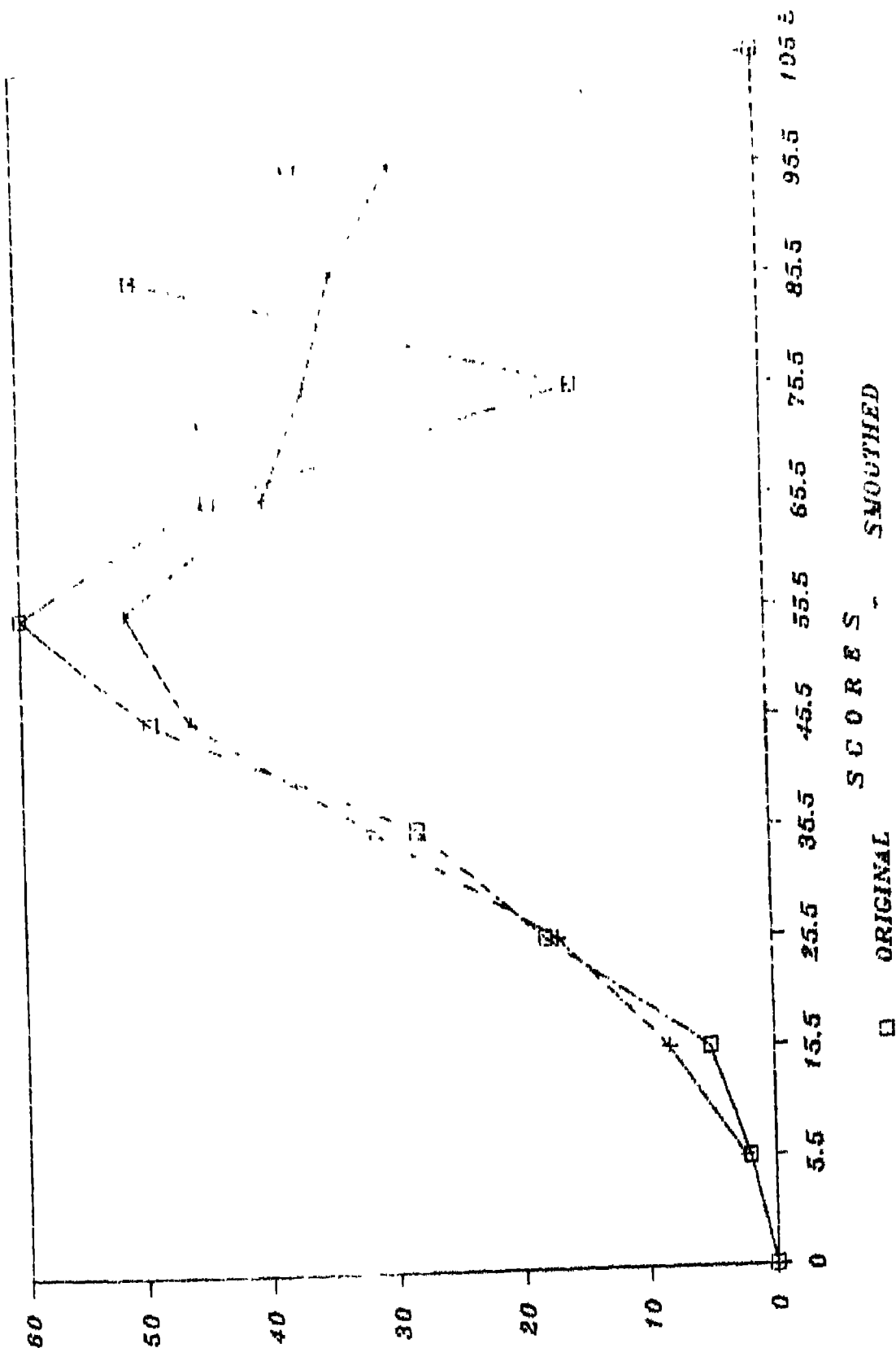
TABLE 4.30 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN FIRST
SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	kur
308	61.44	59.16	54.61	21.99	0.316	0.311

The distribution of language scores for the total sample in first semester exam is normally distributed with a slight variability. The curve of the distribution is positively skewed and platykurtic in nature.

TABLE 4.30 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED IN
FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.25	58.98 – 63.89	58.20 – 64.67
SD	0.88	20.25 – 23.74	19.70 – 24.29

The .95 and .99 confidence limits for the means and SDs of Language Scores for the total sample in the first semester exam are almost normally distributed in the sample and do not differ widely in their ranges implying the high degree of significance of statistics.

LANGUAGE AND SEX IN FIRST SEMESTER EXAM

TABLE 4.51 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
1 - 10	1.00	0
11 - 20	2.01	0.9
21 - 30	5.52	6.42
31 - 40	9.54	8.25
41 - 50	16.58	14.67
51 - 60	18.09	22.01
61 - 70	14.57	13.76
71 - 80	4.52	5.50
81 - 90	17.50	13.76
91 - 100	10.55	14.67

Figure 4.31 depicts the distribution of language scores obtained in first semester exam for boys and girls in the form of frequency polygons. The frequencies are plotted in percentages.

312

FREQUENCIES %

BOYS SCORES + GIRLS
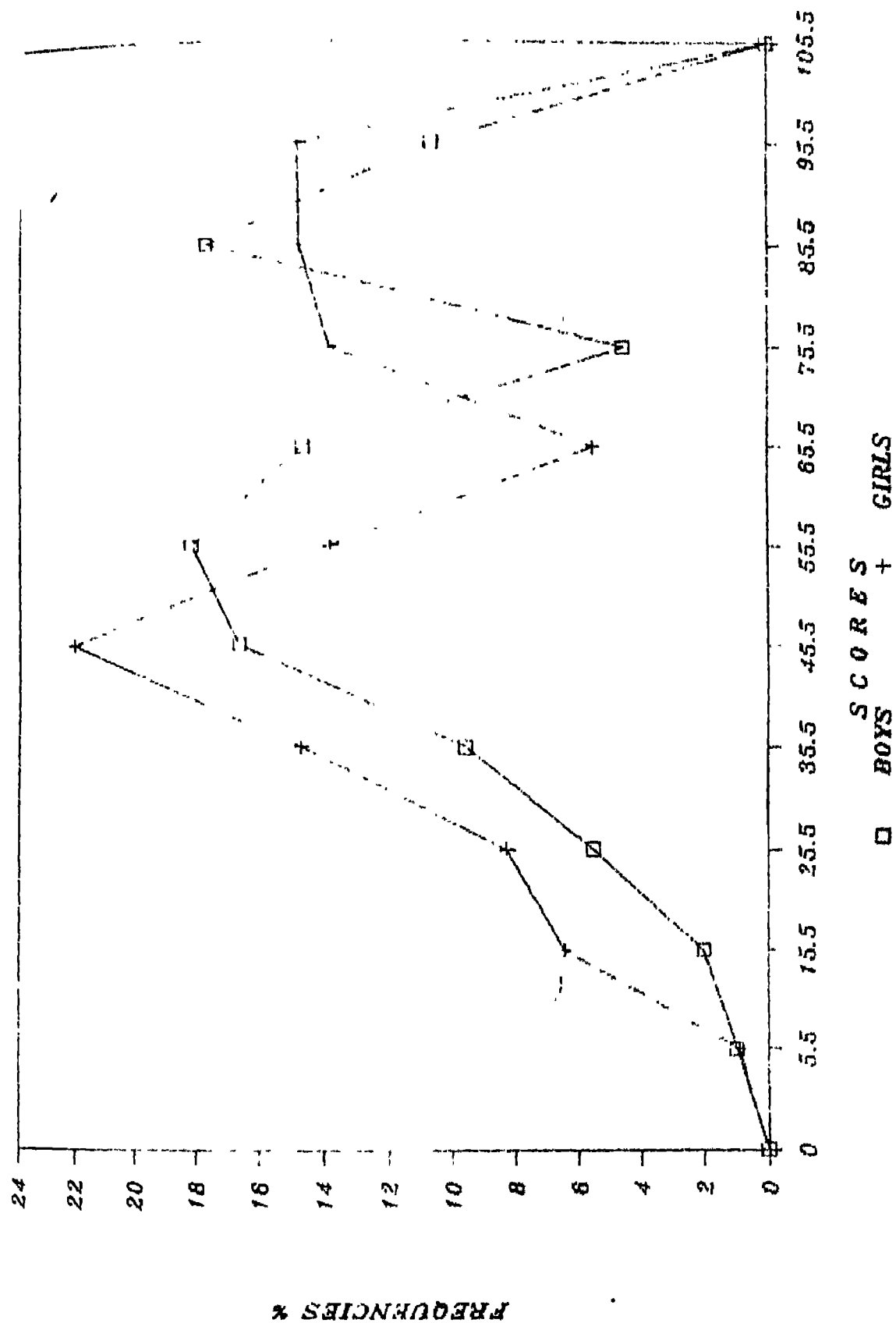
TABLE 4.31 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	60.82	58.97	55.26	22.20	0.250	0.318
Girls	62.56	59.45	53.24	21.55	0.432	0.300

The distributions of language scores among boys and girls in the first semester exam are almost normal with equal degree of variability. The distributions are positively skewed and are platykurtic in nature.

TABLE 4.31 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED IN FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	1.57	57.74 — 63.91	56.76 — 64.88
Girls	2.06	58.51 — 66.61	57.23 — 67.89
	SE OF SD		
Boys	1.11	20.01 — 24.39	19.32 — 25.09
Girls	1.46	18.68 — 24.43	17.77 — 25.34

The .95 and .99 confidence intervals for the Means and SDs of both the groups are comparatively narrow which indicates the high dependability.

LANGUAGE IN SECOND UNIT TEST

TABLE 4.32(a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN SECOND UNIT
TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	0.67
11 - 20	2	5.33
21 - 30	14	10.00
31 - 40	14	19.00
41 - 50	29	22.00
51 - 60	23	23.00
61 - 70	62	41.67
71 - 80	40	38.33
81 - 90	73	54.67
91 - 100	51	41.33
TOTAL	308	

Figure 4.32 gives the original and smoothed
frequency polygons of language scores obtained in Second Unit
Test for the total sample.

L.S.(AT 2nd U.T.) OF THE TOTAL SAMPLE

Fig. 4

S C O R E S

□ ORIGINAL   + SMOOTHED

316
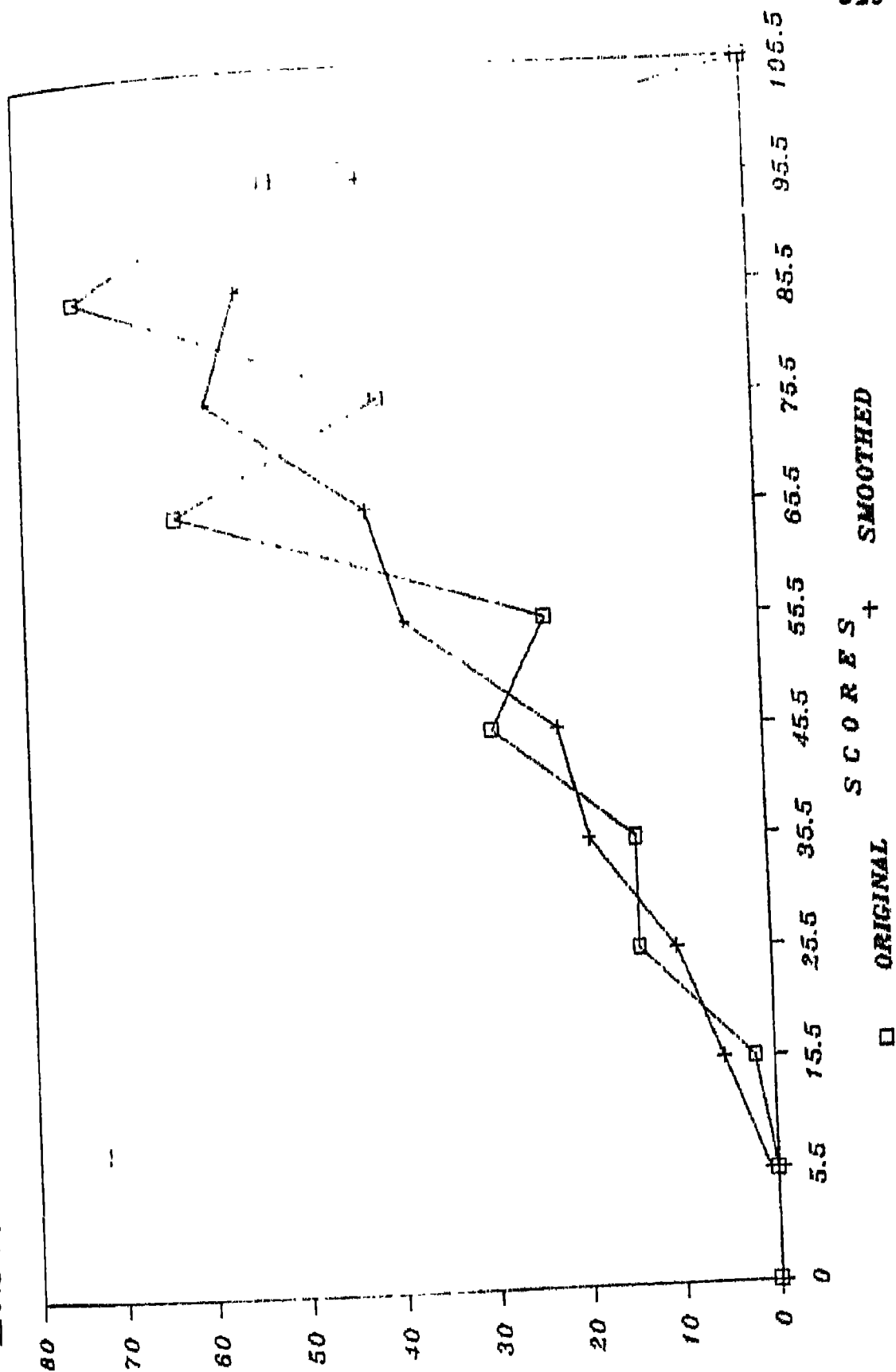
TABLE 4.32 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN SECOND
UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	70.37	73.00	78.25	20.20	-0.390	0.266

The distribution of Language Scores for the
total sample in Second Unit Test is fairly normal. The
distribution is negatively skewed and is platykurtic in
nature.

TABLE 4.32(c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED IN
SECOND UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.15	68.11 - 72.62	67.40 - 73.33
SD	0.81	18.59 - 21.80	18.09 - 22.31

The .95 and .99 confidence limits for the Means
and SDs of Language scores in Second Unit Test have very
narrow ranges. This implies that the sample statistics are
dependable as true measures.

LANGUAGE AND SEX IN SECOND UNIT TEST

TABLE 4.33 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN SECOND UNIT TEST

FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0	0
11 - 20	1.00	0
21 - 30	4.52	4.58
31 - 40	4.02	5.50
41 - 50	9.04	10.09
51 - 60	8.54	5.50
61 - 70	19.09	22.01
71 - 80	13.06	12.84
81 - 90	24.62	22.01
91 - 100	16.08	17.43

Figure 4.33 depicts the distribution of Language scores obtained in second unit test for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

L.S.(AT 2nd U.T.) OF BOYS AND GIRLS Fig.4·33

FREQUENCIES %

SCORES

□ - BOYS   + - GIRLS

318
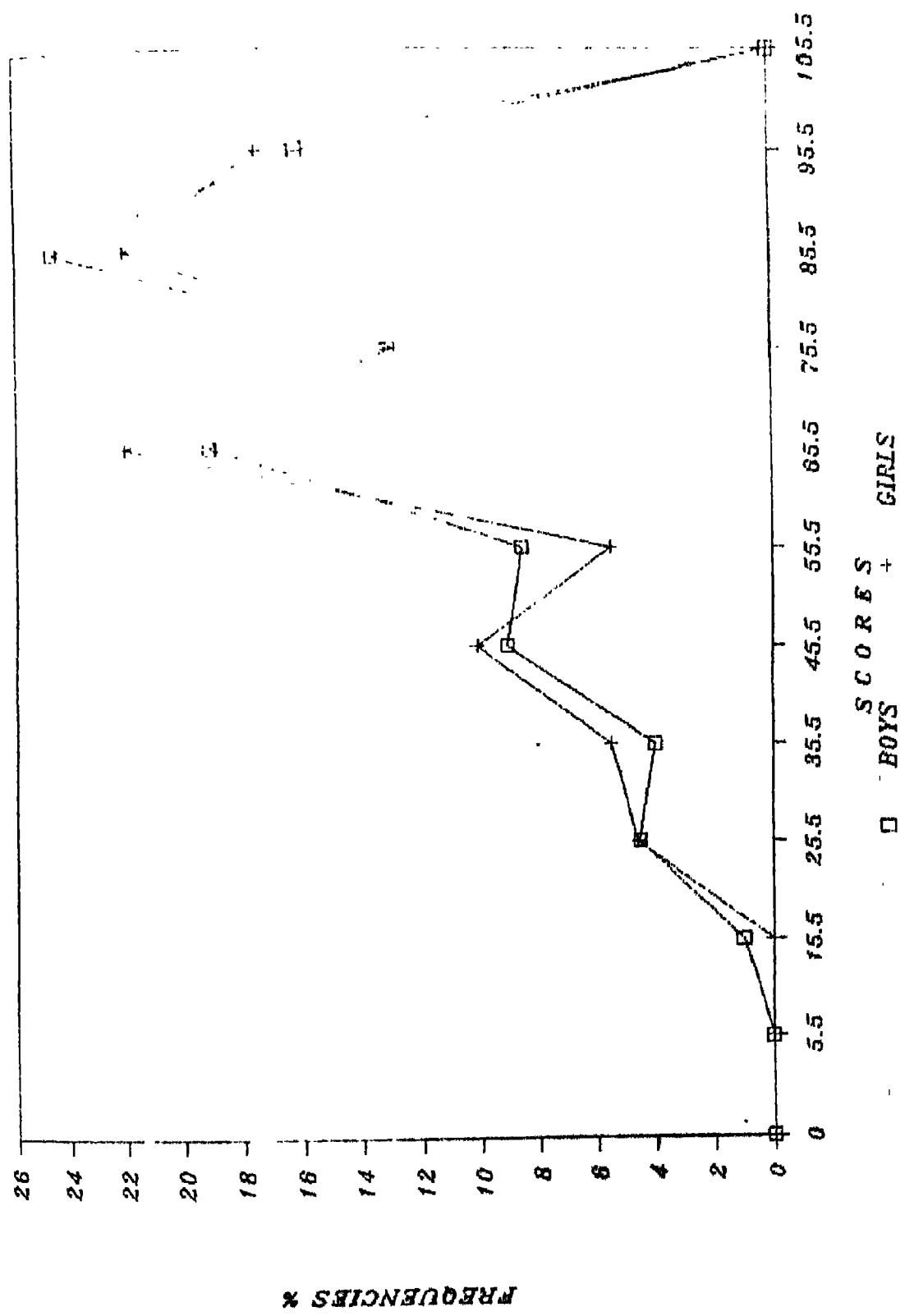
TABLE 4.33 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN
SECOND UNIT TEST FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	70.37	73.38	79.40	20.27	-0.445	0.270
Girls	70.36	72.28	76.13	20.07	-0.287	0.255

The distribution of language scores for both boys and girls in second unit test is fairly normal. The distributions are negatively skewed with the distribution of boys being platykurtic and that of girls being leptokurtic.

TABLE 4.33 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED
IN SECOND UNIT TEST FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.43	67.55 -	73.19	66.66 -	74.08
Girls	1.92	66.59 -	74.13	65.40 -	75.32
	SE of SD				
Boys	1.02	18.27 -	22.27	17.63 -	22.90
Girls	1.36	17.39 -	22.74	16.55 -	23.59

The .95 and .99 confidence limits for the Means and SDs of boys and girls are comparatively narrow which indicates the high dependability.

LANGUAGE IN SECOND SEMESTER EXAM

TABLE 4.34 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	0
11 - 20	0	1.67
21 - 30	5	4.00
31 - 40	7	10.33
41 - 50	19	16.00
51 - 60	22	33.00
61 - 70	58	46.00
71 - 80	58	66.00
81 - 90	82	65.67
91 - 100	57	46.33
TOTAL	308	

Figure 4.34 gives the original and smoothed frequency polygons of language scores obtained in second semester exam for the total sample.

L.S.(AT 2nd S.E.) OF THE TOTAL SAMPLE Fig.4.34.

FREQUENCIES

ORIGINAL □   SCORES   + SMOOTHED

321
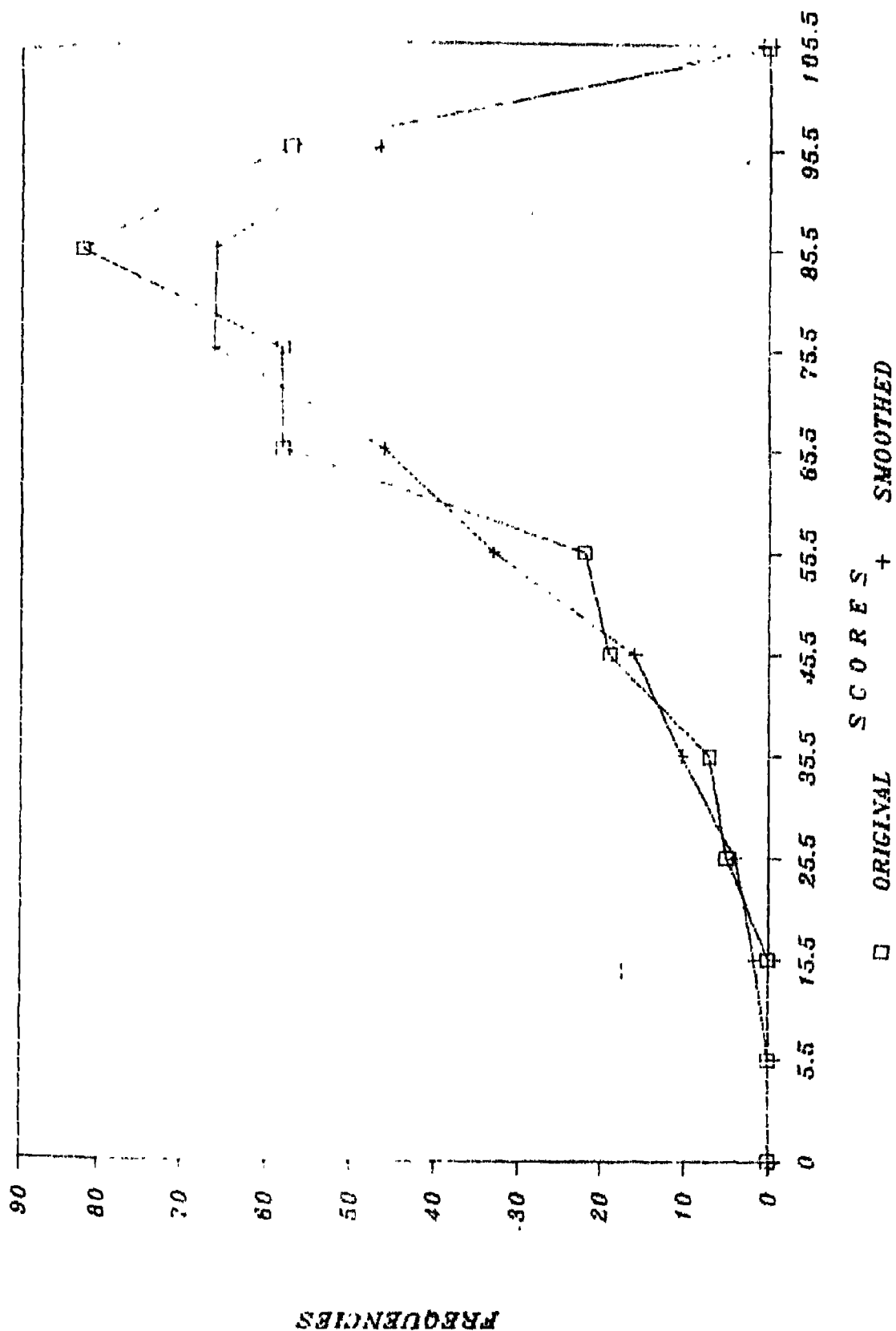
TABLE 4.34 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	74.98	77.91	83.78	16.74	-0.525	0.261

The distribution of language scores among the total sample of children in second semester exam is near normal. The skewness of the distribution is negative and is leptokurtic in nature.

TABLE 4.34 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED IN SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	0.95	73.11 - 76.85	72.51 - 77.44
SD	0.67	15.41 - 18.06	14.99 - 18.48

The .95 and .99 confidence limits for the Means and SDs of Language scores in Second Semester exam do not exhibit a wide range. This supports the normality of distribution and also the high degree of significance of the sample statistics.

LANGUAGE AND SEX IN SECOND SEMESTER EXAM

TABLE 4.35 (a)

DISTRIBUTION OF LANGUAGE SCORES OBTAINED IN SECOND
SEMESTER EXAM FOR BOYS AND GIRLS

Scores	Boys	F	%	Girls	F	%
1 - 10		0			0	
11 - 20		0			0	
21 - 30		2.01			0.9	
31 - 40		2.01			2.75	
41 - 50		6.05			6.42	
51 - 60		8.54			4.58	
61 - 70		19.09			18.34	
71 - 80		17.08			22.01	
81 - 90		27.13			25.65	
91 - 100		18.09			19.26	

Figure 4.35 depicts the distribution of language scores obtained in second semester exam in the form of frequency polygons. The frequencies are plotted as percentages.

L.S.(AT 2nd S.E.) OF BOYS AND GIRLS   Fig.4.35

FREQUENCIES %

SCORES

□ BOYS   + GIRLS

324
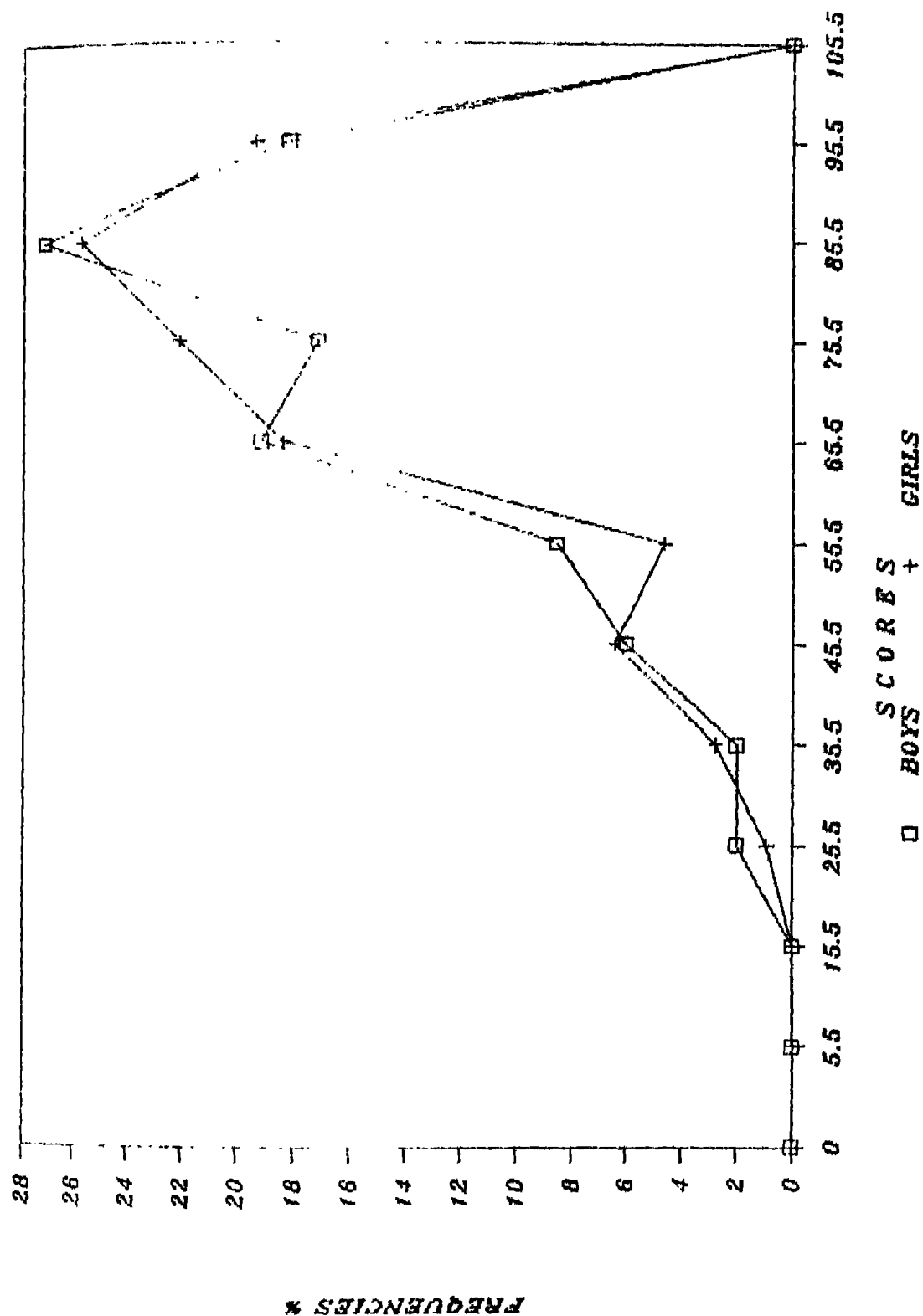
TABLE 4.35 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN SECOND SEMESTER EXAM FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	74.59	77.70	83.92	16.98	-0.549	0.270
Girls	75.68	78.20	83.25	16.25	-0.466	0.246

The distribution of language scores among boys and girls are almost normal. Both have negative skewness and their variabilities too are comparable, and the group of boys is platykurtic and that of girls is leptokurtic.

TABLE 4.35 (c)

FIDUCIARY LIMITS OF MEAN & SD OF LANGUAGE SCORES OBTAINED IN SECOND SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	1.20	72.93 - 76.95	71.48 - 77.70
Girls	1.55	72.63 - 78.73	71.66 - 79.70
	SE of SD		
Boys	0.85	15.31 - 18.66	14.78 - 19.19
Girls	1.10	14.08 - 18.42	13.40 - 19.10

The .95 and .99 confidence limits for both the sexes in second semester exam have fairly narrow ranges, denoting the high dependability of these sample statistics.

TABLE 4.36 (a)

DISTRIBUTION OF NUMBER WORK SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	2	3.33
11 - 20	8	8.33
21 - 30	15	14.00
31 - 40	19	21.00
41 - 50	29	28.33
51 - 60	37	40.00
61 - 70	54	39.33
71 - 80	27	44.66
81 - 90	53	48.00
91 - 100	64	39.00
Total	508	

Figure 4.56 gives the original and smoothed frequency polygons of Number Work scores for the total sample.

Fig. 4.34

N.W. OF THE TOTAL SAMPLE

FREQUENCIES

SCORES   □ ORIGINAL   + SMOOTHED
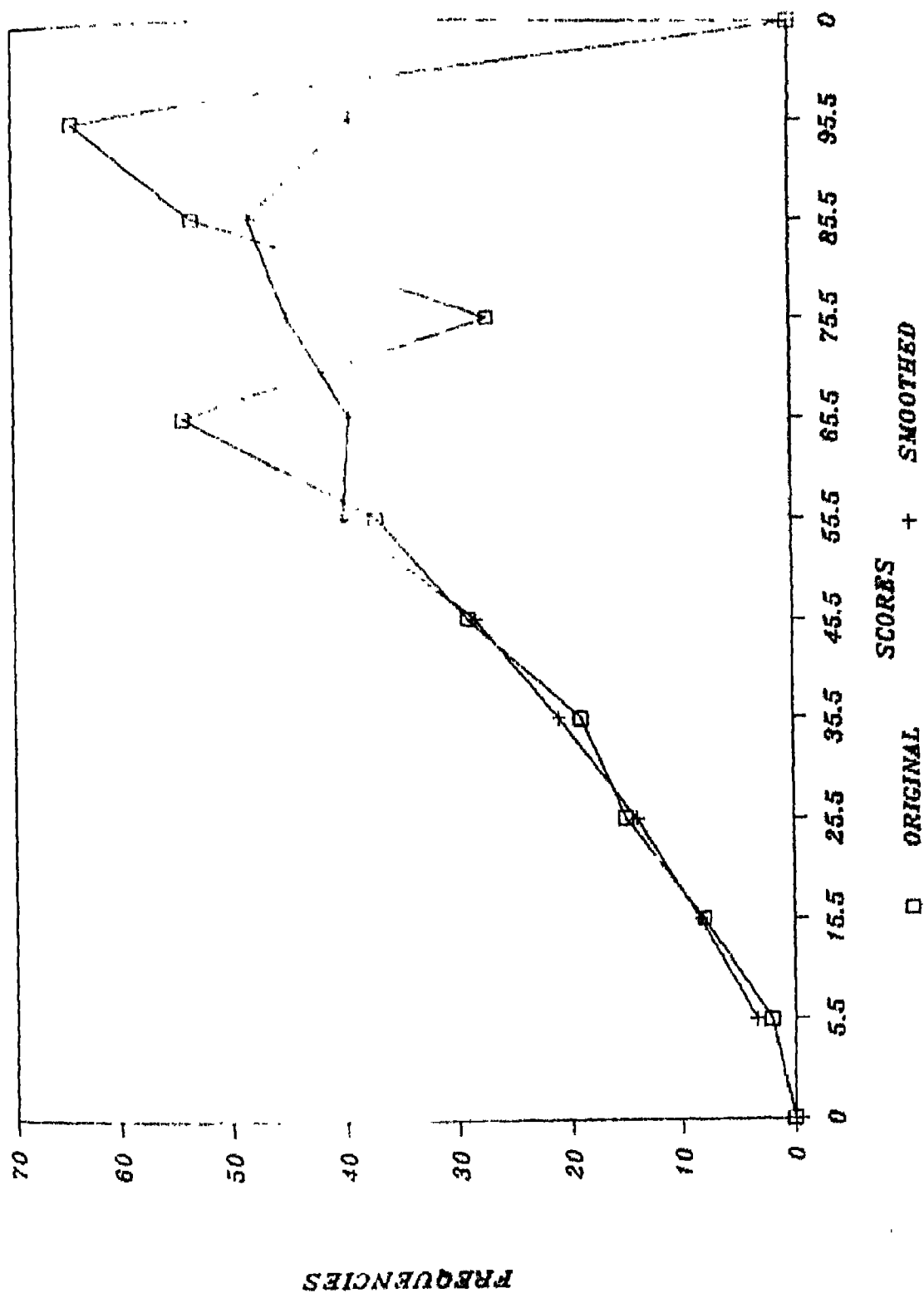
TABLE 4.36 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES
FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	67.48	68.64	70.98	23.06	-0.151	0.293

The distribution of Number Work scores among the total sample of children is near normal. The skewness of the distribution is negative and is platykurtic.

TABLE 4.36 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES
FOR THE TOTAL SAMPLE

Statisti	SE	.95		.99	
Mean	1.31	64.90	- 70.05	64.08	- 70.87
SD	0.93	21.23	- 24.89	20.65	- 25.47

The .95 and .99 fiduciary intervals of means and SDs of Number Work scores for the total sample do not vary broadly, implying a high dependability of the sample statistics.

TABLE 4.37 (a)

DISTRIBUTION OF NUMBER WORK SCORES FOR BOYS AND GIRLS

IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	1.00	0
11 - 20	2.51	2.75
21 - 30	4.52	5.50
31 - 40	5.52	7.33
41 - 50	9.54	9.17
51 - 60	11.55	12.84
61 - 70	16.08	20.18
71 - 80	9.04	8.25
81 - 90	18.59	13.76
91 - 100	21.60	20.18

Figure 4.37 depicts the distribution of Number Work Scores for Boys and Girls in the form of frequency polygons. The frequencies are plotted as percentages.

N.W. OF BOYS AND GIRLS

Fig. 4.37.

FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS

330
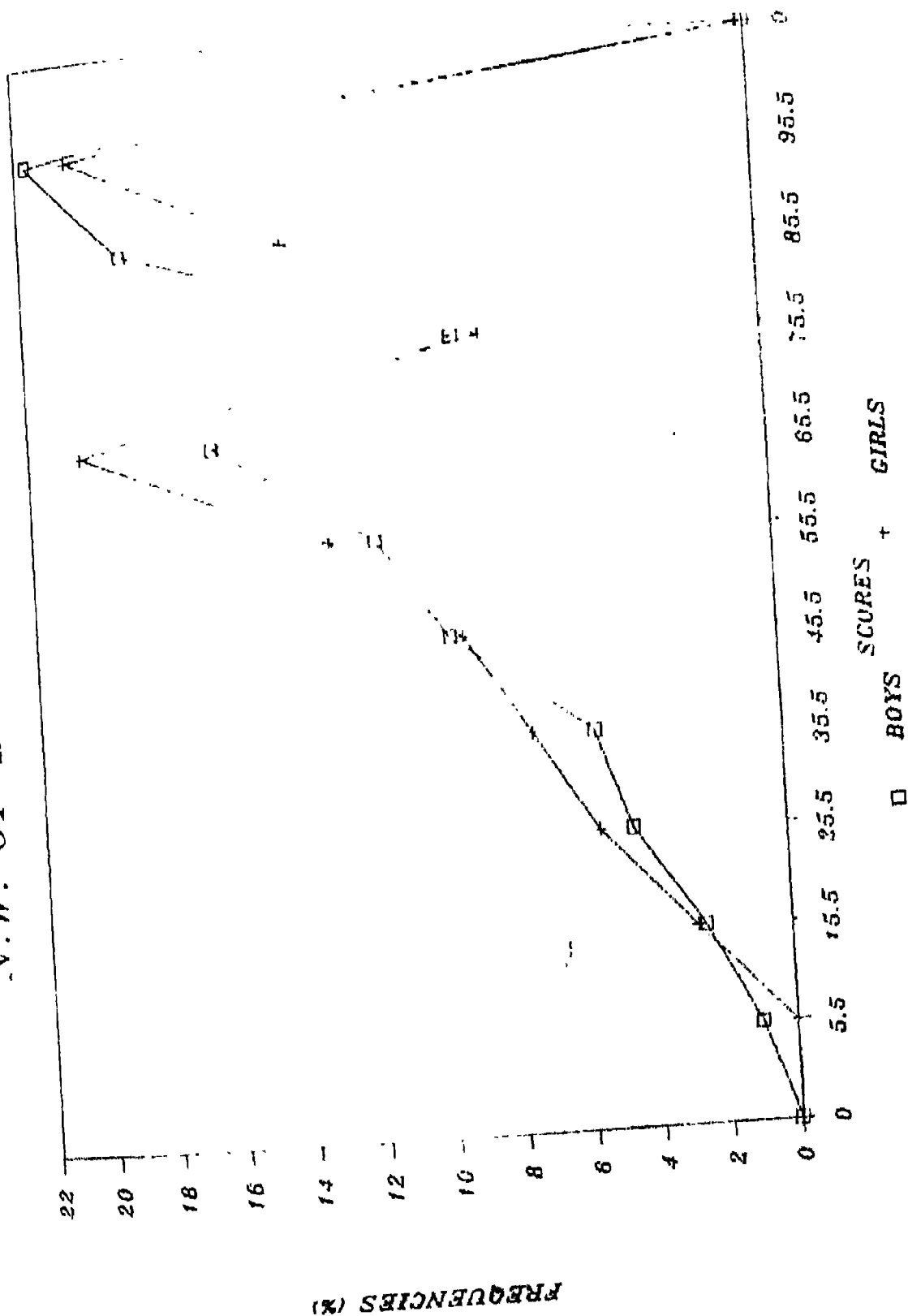
TABLE 4.37 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES

FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	68.21	70.03	73.66	23.26	-0.234	0.295
Girls	66.23	66.55	67.44	22.73	-0.053	0.289

The distribution of Number Work Scores among the boys and girls are almost normally distributed. Both the distributions are negatively skewed and are platykurtic in nature.

TABLE 4.37 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK

SCORES FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.64	64.98	- 71.44	63.95	- 72.46
Girls	2.17	61.96	- 70.50	60.61	- 71.85
	SE of SD				
Boys	1.17	20.97	- 25.56	20.24	- 26.28
Girls	1.54	19.70	- 25.76	18.74	- 26.72

The .95 and .99 confidence limits of Means and SDs of Number Work Scores for boys and girls have fairly narrow ranges, thus implying that the sample statistics are almost dependable.

NUMBER WORK IN FIRST UNIT TEST

TABLE 4.38 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN FIRST
UNIT TEST FOR THE TOTAL SAMPLE

Scores	f	SMF
1 - 10	5	5.66
11 - 20	12	12.66
21 - 30	21	21.66
31 - 40	32	34.00
41 - 50	49	46.00
51 - 60	57	50.00
61 - 70	44	37.66
71 - 80	12	29.66
81 - 90	33	29.33
91 - 100	43	25.33
Total	508	

Figure 4.38 gives the original and smoothed
frequency polygons of number work scores obtained in first
unit test for the total sample.

N.W. (AT 1st U.T.) OF THE TOTAL SAMPLE Fig. 4.38
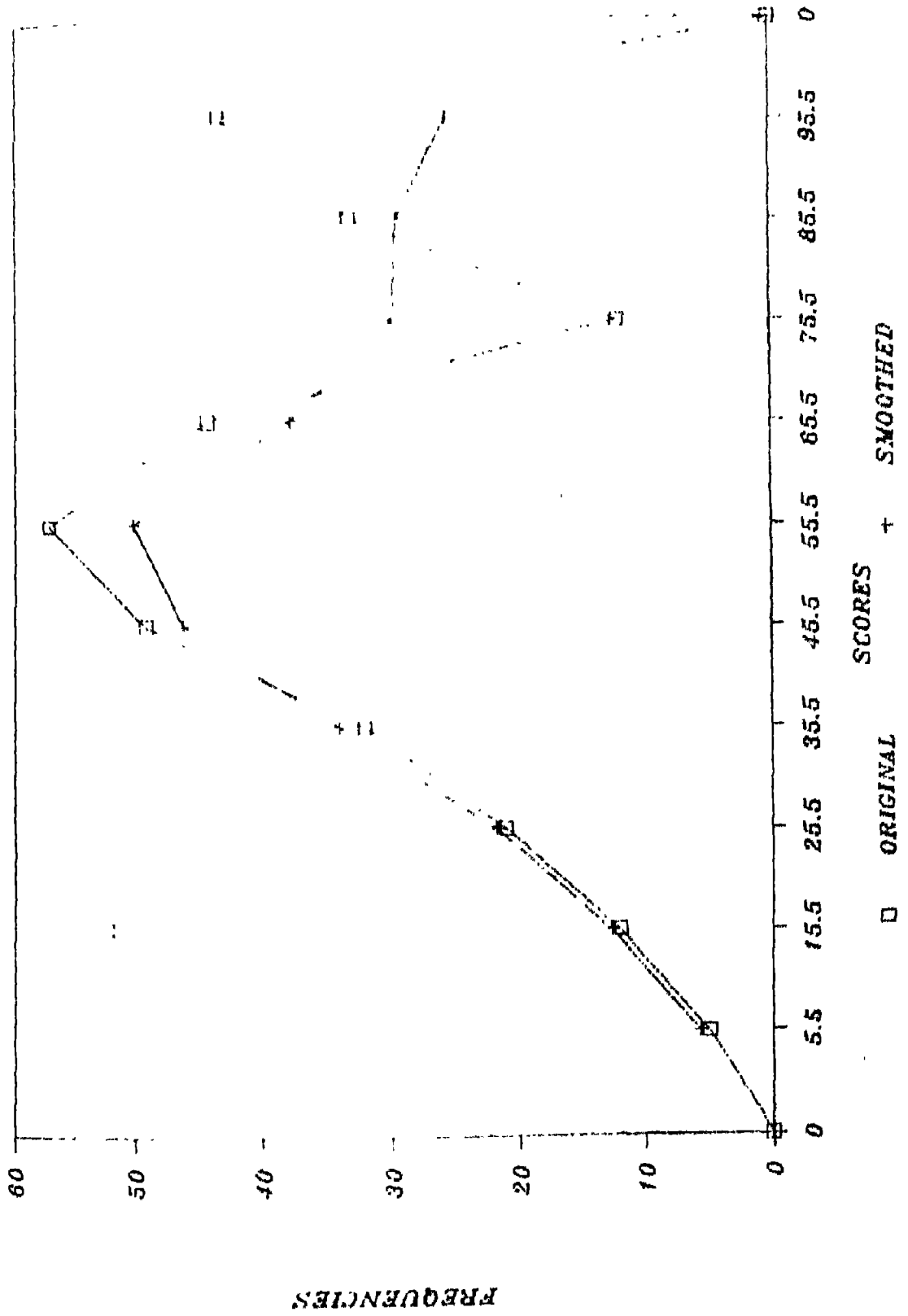
□ ORIGINAL   +   SMOOTHED

SCORES

FREQUENCIES

TABLE   4.38 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	58.42	56.64	53.07	23.72	0.225	0.284

The distribution of Number work scores in first unit test for the total sample is normally distributed with a slight variability. The curve of distribution is positively skewed and platykurtic in nature.

TABLE 4.38 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.35	55.77 - 61.07	54.93 - 61.90
SD	0.95	21.84 - 25.60	21.24 - 26.20

The .95 and .99 confidence limits for the Means and SDs of Number Work Scores in first unit test do not vary widely, thus indicating a fairly high degree of significance of the sample statistics.

NUMBER WORK AND OX IN FIRST UNIT TEST

TABLE 4.39(a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN FIRST UNIT TEST FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
1 - 10	1.50	1.83
11 - 20	3.51	4.58
21 - 30	7.53	5.50
31 - 40	10.55	10.09
41 - 50	16.08	15.59
51 - 60	19.59	16.51
61 - 70	14.57	13.76
71 - 80	3.51	4.58
81 - 90	10.55	11.00
91 - 100	12.56	16.51

Figure 4.39 depicts the distribution of Number Work Scores obtained in First Unit Test for boys and girls, in the form of frequency polygons. The frequencies are plotted as percentages.

336

N.W.(AT 1st U.T.) OF BOYS AND GIRLS   Fig.4.39.
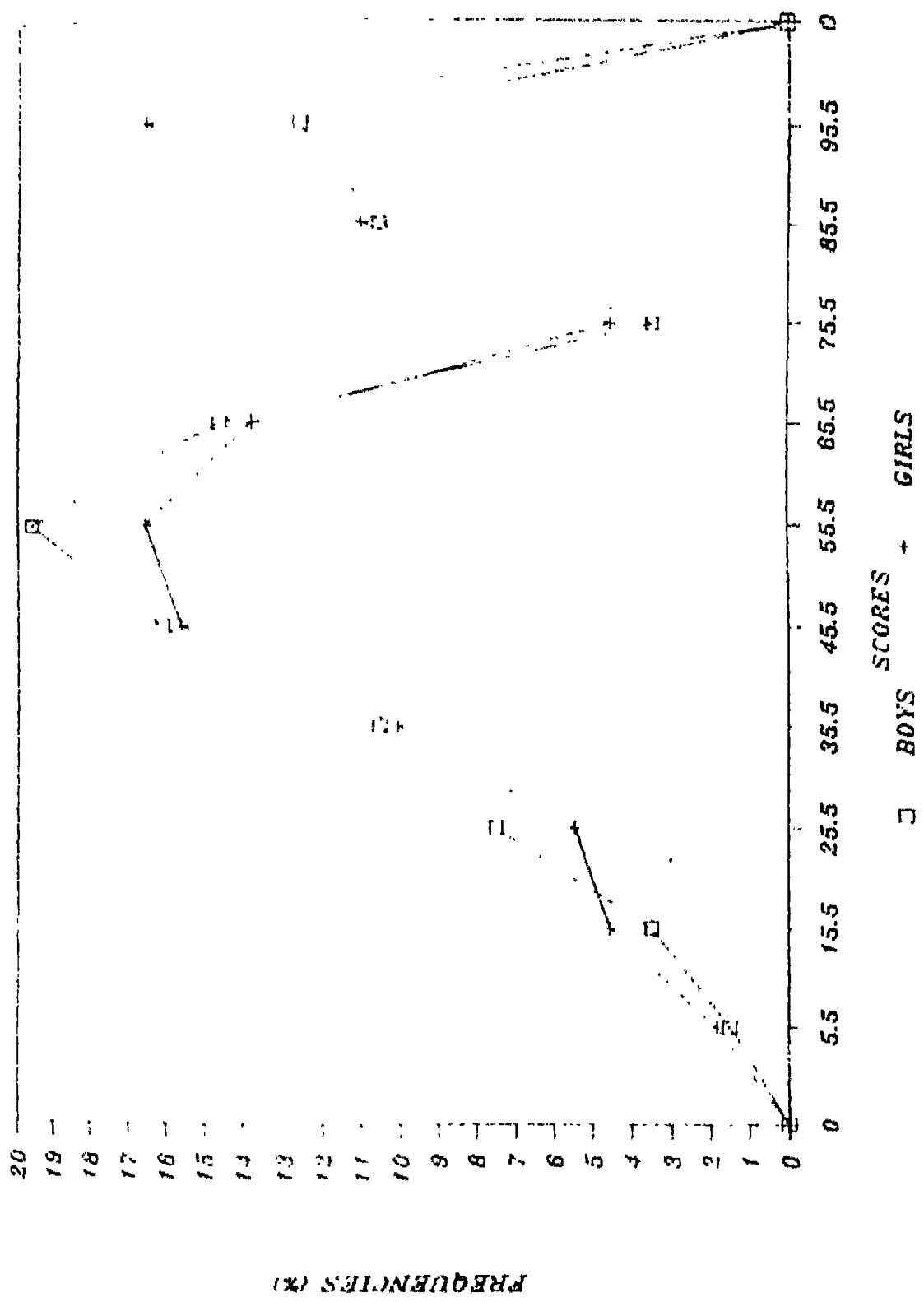
FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS

TABLE   4.59 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED IN FIRST

UNIT TEST FOR THE TOTAL SAMPLE

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	57.71	56.01	52.61	23.23	0.219	0.255
Girls	59.72	58.00	54.55	24.54	0.210	0.299

The Number Work Scores are almost normally distributed in the two groups of boys and girls in first unit test. The distributions are positively skewed and the kurtosis being leptokurtic for the boys and platykurtic for the girls.

TABLE   4.59 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES

OBTAINED IN FIRST UNIT TEST FOR BOYS AND GIRLS

Group	SE M	.95	.99
Boys	1.64	54.48 - 60.93	53.46 - 61.96
Girls	2.55	55.11 - 64.32	53.65 - 65.78
	SE of SD		
Boys	1.16	20.94 - 25.52	20.21 - 26.25
Girls	1.66	21.27 - 27.81	20.23 - 28.84

The .95 and .99 confidence limits for the Means and SDs of Number Work scores of both the sexes in first unit test have fairly narrow ranges, denoting the high dependability of these sample statistics.

NUMBER WORK IN FIRST SEMESTER EXAM

TABLE 4.40 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

Scores	f	SMF
1 - 10	3	4.33
11 - 20	10	10.66
21 - 30	19	19.00
31 - 40	28	24.33
41 - 50	26	33.66
51 - 60	47	40.00
61 - 70	47	37.00
71 - 80	17	38.33
81 - 90	51	42.66
91 - 100	60	37.00
TOTAL	308	

Figure 4.40 gives the original and smoothed frequency polygons of Number Work scores obtained in First Semester Exam for the Total Sample.

Fig. 4.40

N.W. (AT 1st S.E.) OF THE TOTAL SAMPLE

FREQUENCIES

SCORES

□ ORIGINAL   + SMOOTHED
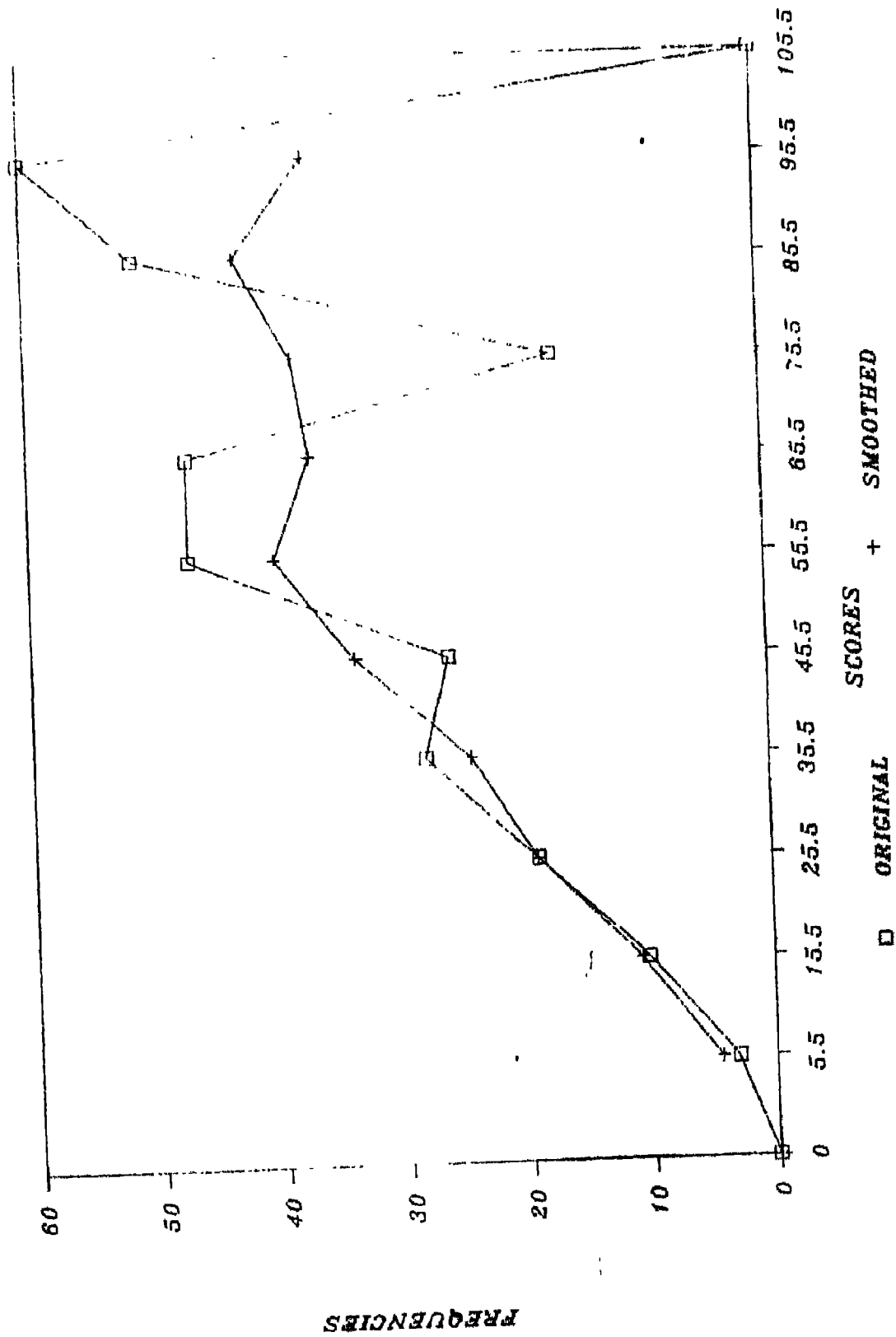
TABLE 4.40 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED
IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	64.59	64.96	65.72	24.33	-0.046	0.306

The distribution of Number Work Scores for the total sample in first semester exam is normally distributed with a slight variability. The curve of the distribution is highly negatively skewed and is platykurtic in nature.

TABLE 4.40 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED
IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.38	61.87 - 67.30	61.01 - 68.16
SD	0.98	22.40 - 26.26	21.79 - 26.87

The .95 and .99 confidence limits for the means and SDs of Number Work Scores for the total sample in the first semester exam have relatively narrow ranges implying the high degree of significance of statistics.

NUMBER WORK AND SFX IN 1SI SEMESTER EXAM

TABLE 4.41 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN FIRST SEMESTER
EXAM FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	1.00	0.92
11 - 20	3.52	2.75
21 - 30	5.53	7.34
31 - 40	9.05	9.17
41 - 50	7.04	11.01
51 - 60	16.08	13.76
61 - 70	15.08	15.60
71 - 80	6.03	4.59
81 - 90	17.09	15.60
91 - 100	19.60	19.27

Figure 4.41 depicts the distribution of Number
Work scores obtained in first semester exam for boys and
girls in the form of frequency polygons.

Fig. 4.4

N.W. (AT 1st S.E.) OF BOYS AND GIRLS

FREQUENCIES (%)

□ BOYS   + GIRLS

SCORES

0   5.5   15.5   25.5   35.5   45.5   55.5   65.5   75.5   85.5   95.5   105.5

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
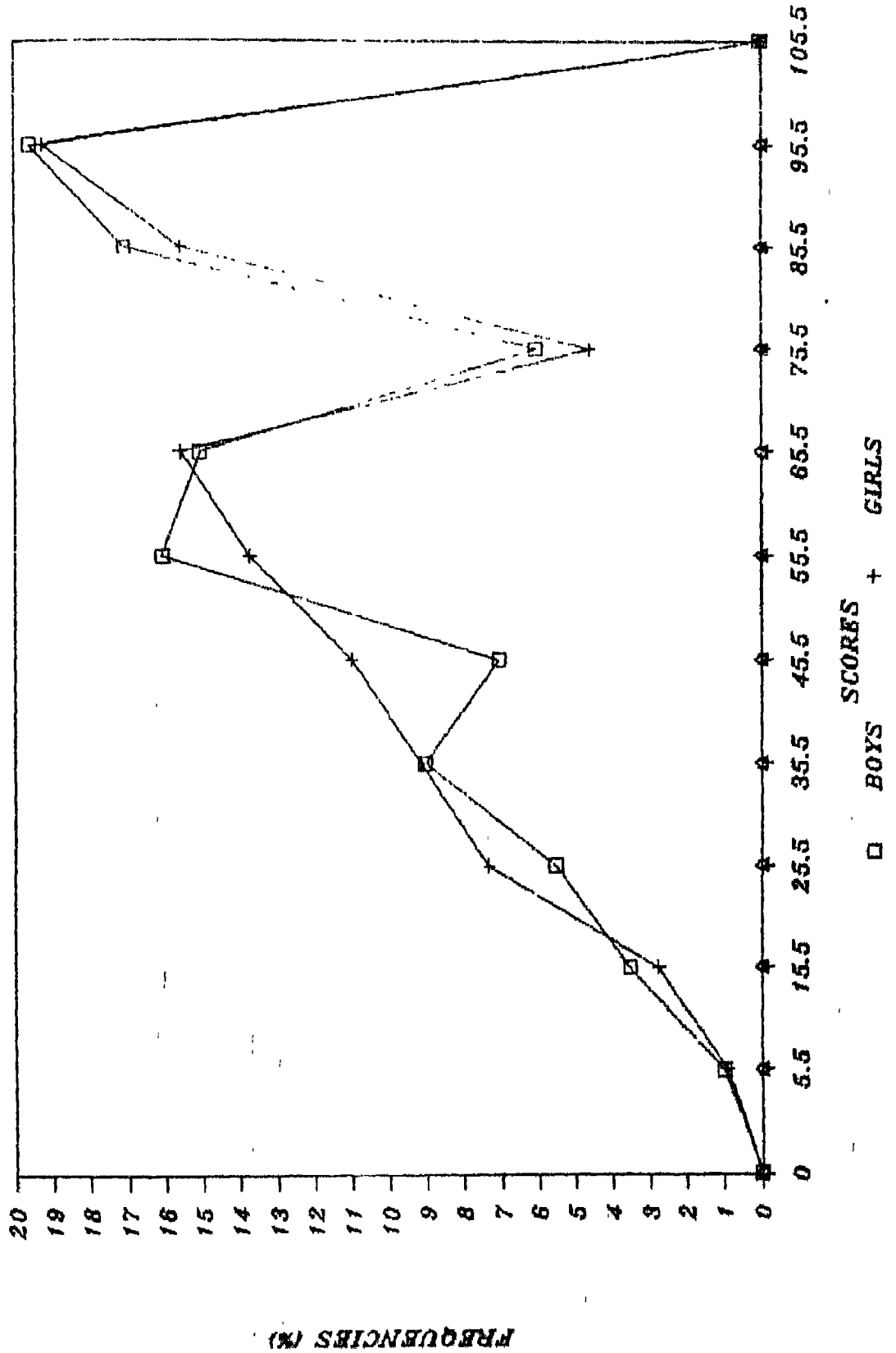
TABLE 4.41 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED IN

FIRST SEMESTER EXAM FOR THE BOYS AND GIRLS

N	Mean	Median	Mode	SD	SK	Kur
Boys	65.09	65.67	66.80	24.27	-0.072	0.296
Girls	63.67	63.74	63.88	24.43	-0.008	0.317

The distribution of Number Work Scores among boys and girls in the first semester exam are almost normal with equal degree of variability. The distributions are negatively skewed and platykurtic in nature.

TABLE 4.41 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED

IN FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	1.72	61.73 - 68.47	60.66 - 69.54
Girls	2.34	59.08 - 68.25	57.63 - 69.70
	SE of SD		
Boys	1.22	21.87 - 26.66	21.11 - 27.42
Girls	1.66	21.17 - 27.68	20.14 - 28.71

The .95 and .99 confidence intervals for the means and SDs of both the groups are comparatively narrow which indicates the high dependability.

NUMBER WORK IN SECOND UNIT TEST

TABLE   4.42 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN SECOND UNIT TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	2.33
11 - 20	7	6.00
21 - 30	11	10.00
31 - 40	12	16.00
41 - 50	25	21.67
51 - 60	28	38.33
61 - 70	62	40.33
71 - 80	31	49.67
81 - 90	56	54.33
91 - 100	76	44.00
TOTAL	308	

Figure   4.42   gives the original and   smoothed frequency   polygons of Number Work Scores obtained in   Second Unit Test for the total sample.

Fig. 4.42

N.W. (AT 2nd U.T.) OF THE TOTAL SAMPLE

FREQUENCIES

SCORES   +   SMOOTHED

□   ORIGINAL
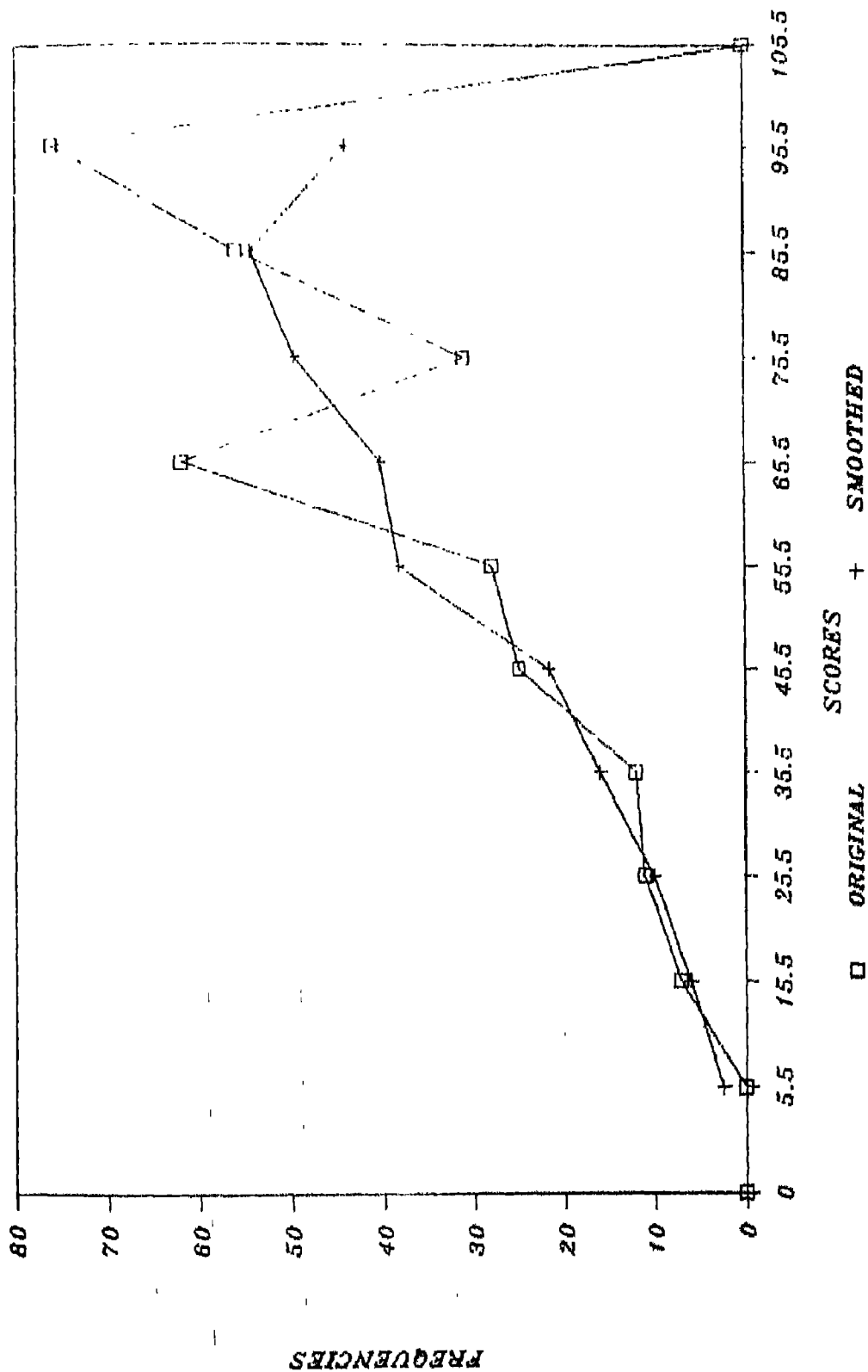
TABLE 4.42 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED IN SECOND UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	Sk	Kur
308	71.27	73.40	77.65	21.49	-0.297	0.287

The distribution of number work scores for the total sample in second unit test is fairly normal. The distribution is negatively skewed and platykurtic in nature.

TABLE 4.42(c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED IN SECOND UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.22	68.87 – 73.67	68.11 – 74.43
SD	0.86	19.79 – 23.19	19.25 – 23.73

The .95 and .99 confidence limits for the Means and SDs of Academic Achievement scores in Second Unit Test have very narrow ranges. This implies that the sample statistics are dependable as true measures.

NUMBER WORK AND SEX IN SECOND UNIT TEST

TABLE 4.43 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN SECOND UNIT
TEST FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0	0
11 - 20	2.51	1.83
21 - 30	3.51	3.58
31 - 40	3.51	4.58
41 - 50	9.04	6.42
51 - 60	9.04	9.17
61 - 70	17.08	25.68
71 - 80	11.05	8.25
81 - 90	20.60	13.76
91 - 100	23.61	26.60

Figure 4.43 depicts the distribution of Number
Work Scores obtained in second unit test for boys and girls
in the form of frequency polygons. The frequencies are
plotted as percentages.

N.W. (AT 2nd U.T.) OF BOYS AND GIRLS   Fig. 4.43

FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS

348
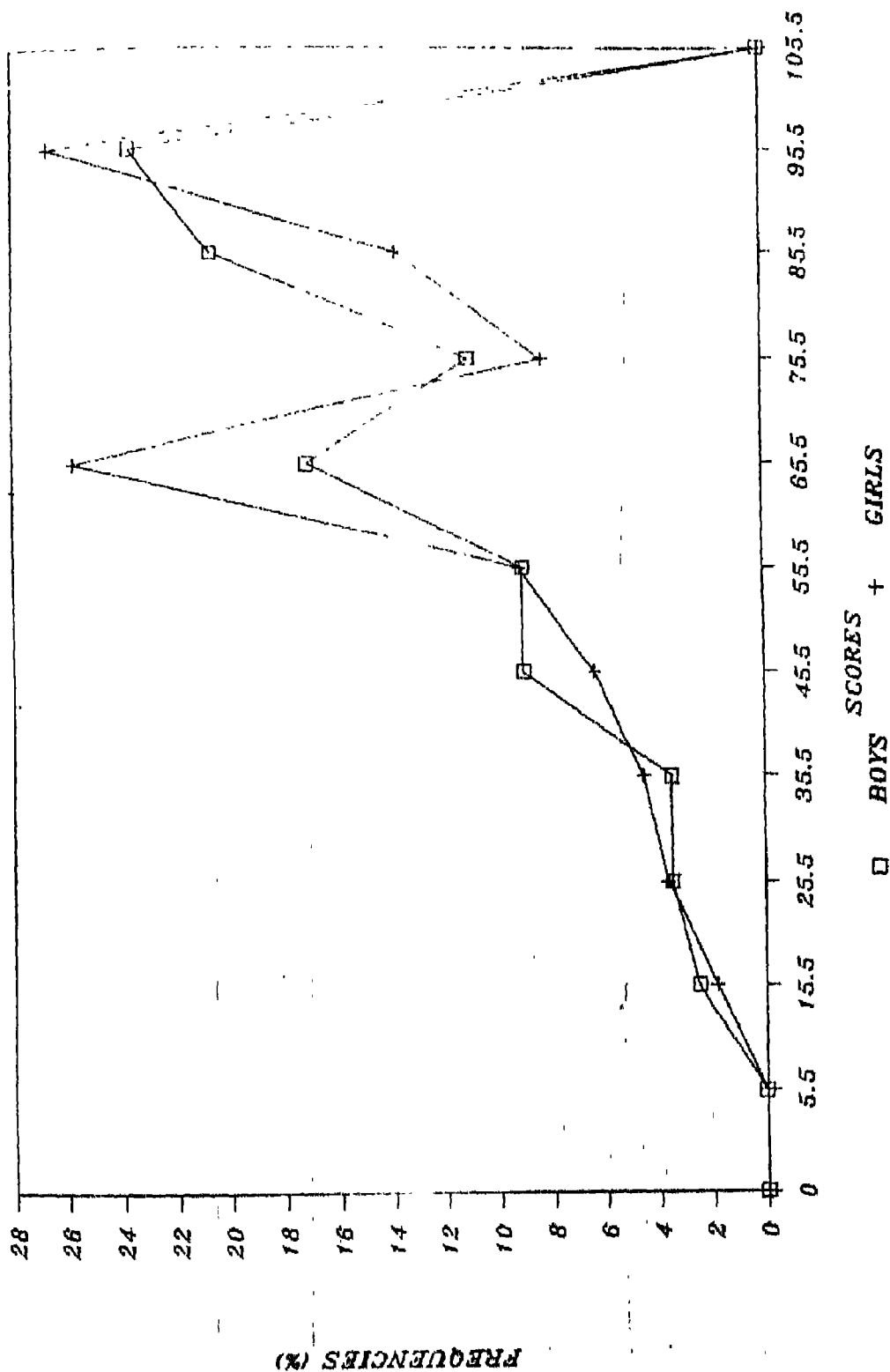
TABLE 4.43 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED IN SECOND UNIT TEST FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	71.37	75.27	83.05	21.62	-0.540	0.291
Girls	71.09	69.96	67.70	21.26	0.159	0.277

The distribution of Number Work Scores for both boys and girls in second unit test is fairly normal. The distribution of the boys is negatively skewed and girls is positively skewed. The distributions are platykurtic in nature.

TABLE 4.43(c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED IN SECOND UNIT TEST FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.53	68.37	— 74.38	67.42	— 75.33
Girls	2.03	67.10	— 75.08	65.84	— 76.35
SE of SD					
Boys	1.08	19.48	— 23.75	18.81	— 24.42
Girls	1.44	18.42	— 24.09	17.53	— 24.99

The .95 and .99 confidence limits for the Means and SDs of boys and girls in second unit test are comparatively narrow which indicates the high dependability.

NUMBER WORK IN SECOND SEMESTER EXAM

TABLE   4.44 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED IN SECOND
SEMESTER EXAM FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	1.00
11 - 20	3	4.00
21 - 30	9	6.00
31 - 40	6	9.67
41 - 50	14	12.67
51 - 60	18	31.67
61 - 70	63	42.67
71 - 80	47	60.33
81 - 90	71	65.00
91 - 100	77	49.33
Total	308	

Figure 4.44 gives the original and smoothed
frequency polygons of Number work scores obtained in second
semester exam for the total sample.

N.W. (AT 2nd S.E.) OF THE TOTAL SAMPLE

FREQUENCIES

□ ORIGINAL   +   SMOOTHED
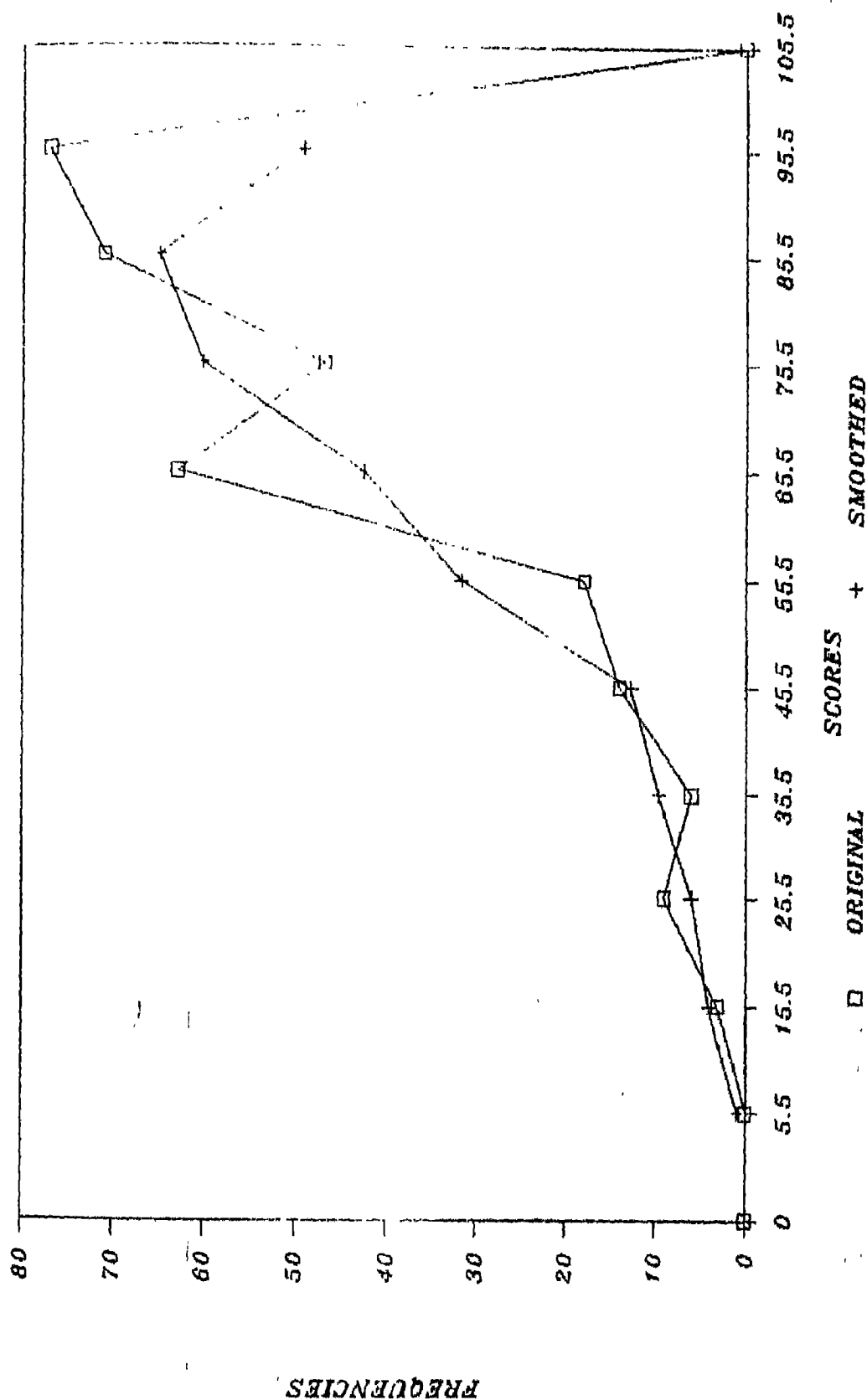
SCORES

TABLE   4.44 (b)

RELEVANT STATISTICS OF NUMBER WORK SCORES OBTAINED IN

SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	75.40	79.22	86.86	18.62	-0.615	0.274

The Number Work Scores are almost normally distributed among the total sample in second semester exam. The distribution is negatively skewed and platykurtic.

TABLE 4.44 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED

IN SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	SE	.95		.99	
Mean	1.06	73.32 - 77.48		72.66 - 78.14	
SD	0.75	17.15 - 20.10		16.68 - 20.57	

The .95 and .99 confidence limits for the Means and SDs of Number Work Scores in second semester exam do not exhibit a wide range. This supports the normality of distribution and also the high degree of significance of the sample statistics.

NUMBER WORK AND SEX IN SECOND SEMESTER EXAM

TABLE 4.45 (a)

DISTRIBUTION OF NUMBER WORK SCORES OBTAINED
IN SECOND SEMESTER EXAM FOR BOYS AND
GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0	0
11 - 20	1.00	0.71
21 - 30	2.51	3.65
31 - 40	2.51	0.91
41 - 50	4.52	4.58
51 - 60	5.52	6.42
61 - 70	21.10	19.26
71 - 80	15.57	14.67
81 - 90	22.61	23.85
91 - 100	24.62	25.68

Figure 4.45 depicts the distribution of Number Work scores obtained in second semester exam for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

N.W. (AT 2nd S.E.) OF BOYS AND GIRLS

Fig. 4.45
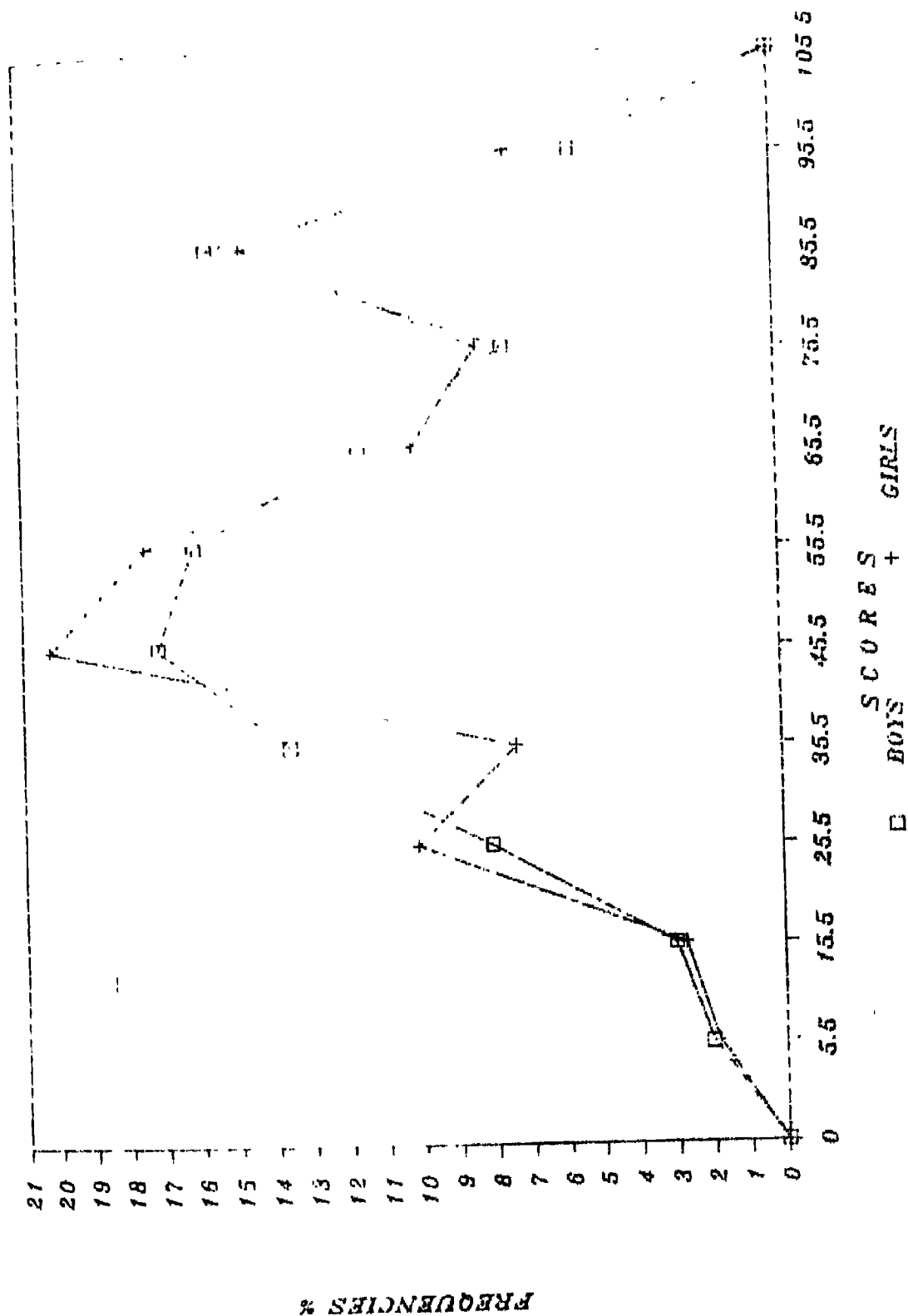
354
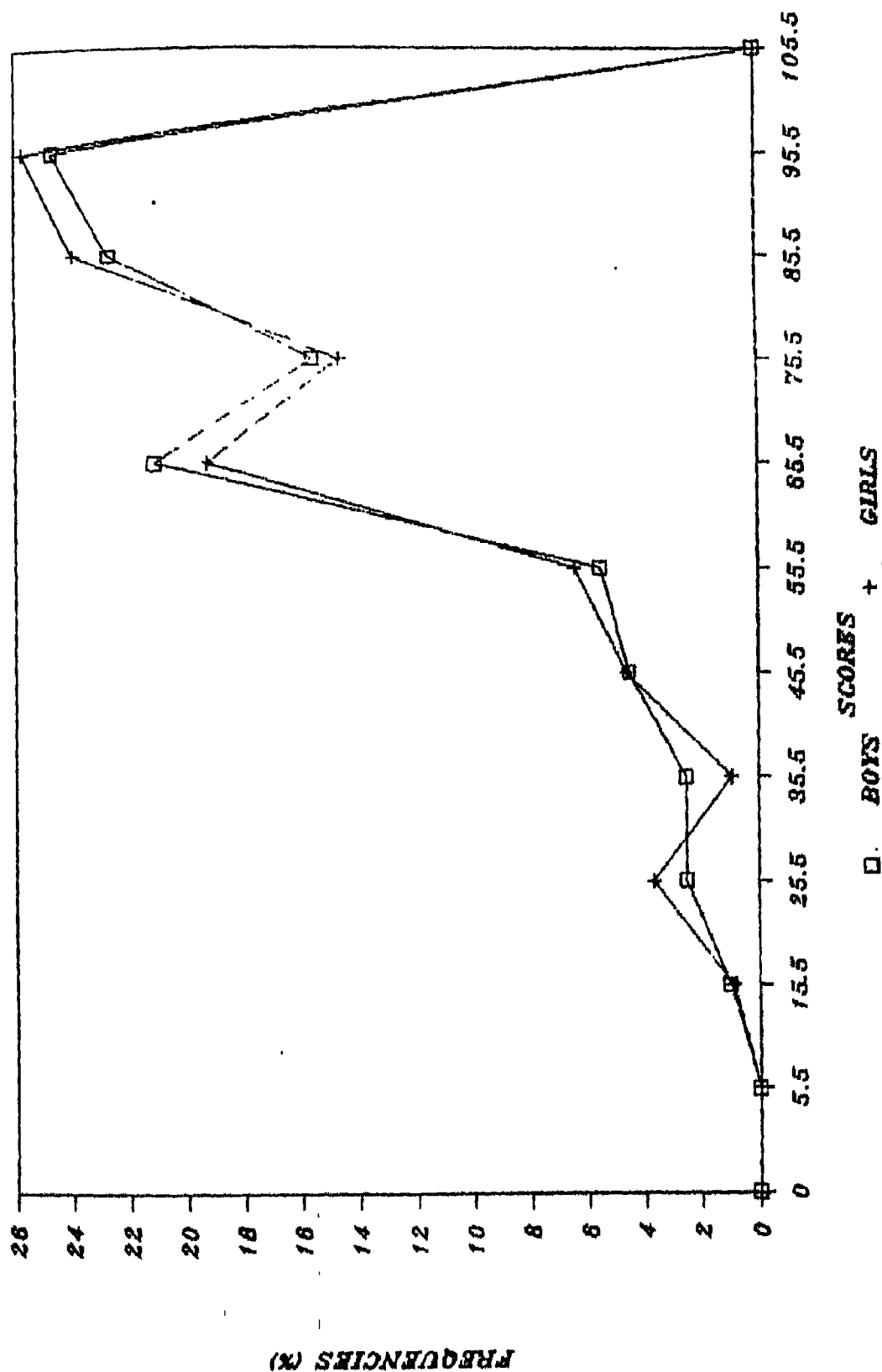
TABLE 4.45 (b)

RELEVANT STATISTICS OF LANGUAGE SCORES OBTAINED IN SECOND
SEMESTER EXAM FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	75.24	78.72	85.67	18.55	-0.562	0.271
Girls	75.68	80.18	89.19	18.76	-0.719	0.279

The distribution of Number Work scores among both boys and girls in second semester exam are almost normal. Both have negative skewness and their variabilities too are comparable and both are also platykurtic.

TABLE 4.45 (c)

FIDUCIARY LIMITS OF MEAN & SD OF NUMBER WORK SCORES OBTAINED
IN SECOND SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.31	72.67 - 77.82		71.85 - 78.64	
Girls	1.79	72.15 - 79.20		71.04 - 80.32	
	SE of SD				
Boys	.93	16.72 - 20.38		16.14 - 20.96	
Girls	1.27	16.26 - 21.27		15.47 - 22.06	

The .95 and .99 confidence limits for both the sexes in second semester exam have fairly narrow ranges, denoting the high dependability of these sample statistics.

GENERAL KNOWLEDGE

TABLE   4.46 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	2	2.67
11 - 20	6	9.00
21 - 30	19	16.33
31 - 40	24	24.67
41 - 50	31	34.33
51 - 60	48	45.67
61 - 70	58	49.00
71 - 80	41	47.00
81 - 90	42	40.00
91 - 100	37	26.33
TOTAL	308	

Figure   4.46 gives the original and smoothed frequency polygons of General Knowledge scores for the total sample.

G.K. OF THE TOTAL SAMPLE

Fig. 4.46

357

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES

TABLE 4.46 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES FOR
THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	63.42	64.63	67.06	21.64	-0.168	0.266

The distribution of General Knowledge scores for
the total sample of children is near normal. The skewness of
the distribution is negative and is platykurtic.

TABLE 4.46 (c)

FIDUCIARY LIMITS OF MEAN & SD OF GENERAL KNOWLEDGE SCORES
FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.23	61.00 — 65.83	60.24 — 66.60
SD	0.87	19.92 — 23.35	19.38 — 23.90

The .95 and .99 fiduciary intervals of
means and SDs of General Knowledge scores for the total
sample do not vary broadly in their ranges, indicating the
dependability of the sample statistics.

GENERAL KNOWLEDGE AND SEX

TABLE 4.47 (a).

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES FOR BOYS AND
GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0.50	0.90
11 - 20	2.01	1.83
21 - 30	6.03	6.42
31 - 40	9.04	5.50
41 - 50	9.54	11.00
51 - 60	14.57	17.43
61 - 70	18.59	19.26
71 - 80	13.56	12.84
81 - 90	13.56	13.76
91 - 100	12.56	11.00

Figure 4.47 depicts the distribution of General
Knowledge scores for boys and girls in the form of frequency
polygons. The frequencies are plotted as percentages.

Fig. 4.47

G.K. OF BOYS AND GIRLS

□ BOYS + GIRLS

BOYS SCORES + GIRLS

FREQUENCIES (%)
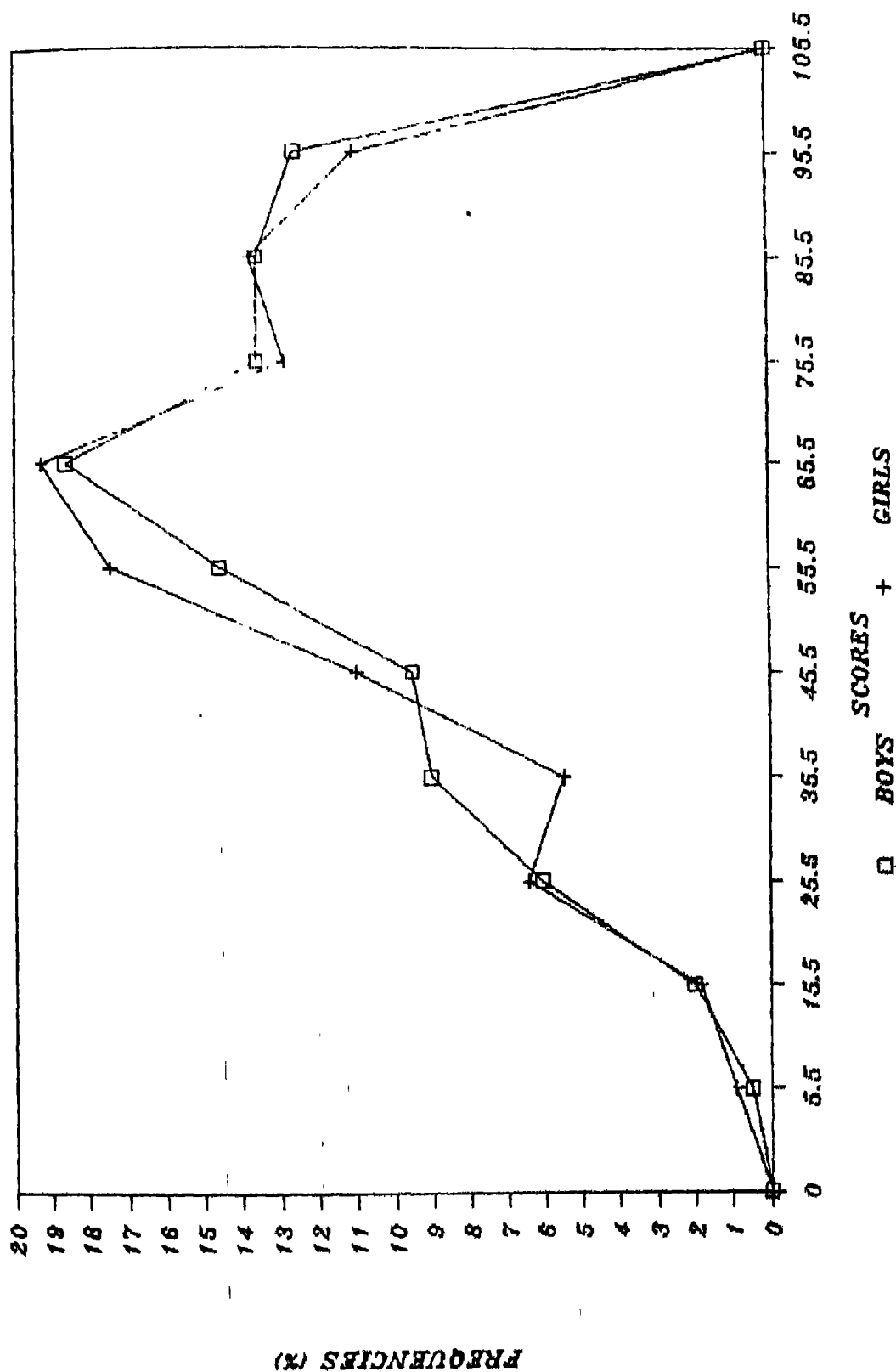
TABLE 4.47 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE

SCORES FOR BOYS AND GIRLS

N	Mean	Median	Mode	SD	SK	Kur
Boys	63.54	64.95	67.79	21.81	-.195	.273
Girls	63.20	64.07	65.80	21.31	-.121	.256

The distribution of General knowledge scores among boys and girls are almost normally distributed. Both the distributions are negatively skewed and the distribution for boys is platykurtic and girls leptokurtic.

TABLE 4.47 (c)

FIDUCIARY LIMITS OF MEAN & SD OF GENERAL KNOWLEDGE

SCORES FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	1.54	60.50 - 66.57	59.54 - 67.53
Girls	2.04	59.20 - 67.20	57.93 - 68.47
	SE of SD		
Boys	1.09	19.66 - 23.97	18.98 - 24.65
Girls	1.44	18.47 - 24.15	17.57 - 25.05

The .95 and .99 confidence limits of Means and SDs of General Knowledge scores for boys and girls have fairly narrow ranges, thus implying that the sample statistics are almost dependable.

GENERAL KNOWLEDGE IN FIRST UNIT TEST

TABLE 4.48 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED IN FIRST
UNIT TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	4	5.00
11 - 20	11	15.33
21 - 30	31	29.00
31 - 40	45	39.33
41 - 50	42	41.66
51 - 60	38	43.33
61 - 70	50	40.66
71 - 80	34	40.33
81 - 90	37	29.00
91 - 100	16	17.66
TOTAL	308	

Figure 4.48 gives the original and smoothed frequency polygons of General Knowledge scores obtained in first Unit Test for the Total Sample.

G.K. (AT 1st U.T.) OF THE TOTAL SAMPLE

Fig. 4.48
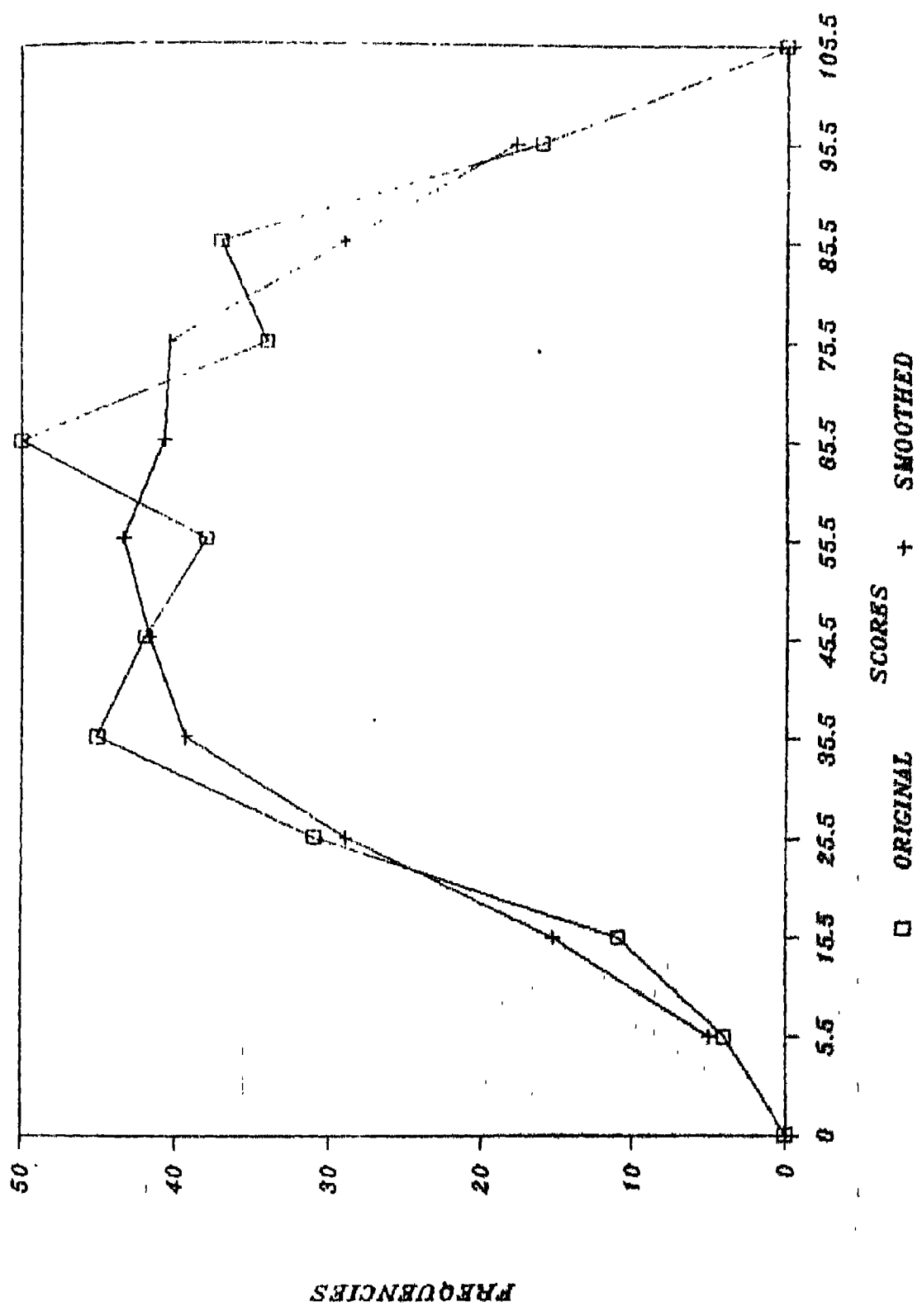
363

□   ORIGINAL   +   SMOOTHED

SCORES

FREQUENCIES

TABLE 4.48 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED

IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	55.62	56.02	56.81	22.44	-0.052	0.295

The distributions of General Knowledge scores in first unit test is normally distributed with a slight variability. The curve of distribution is negatively skewed and is platykurtic in nature.

TABLE 4.48 (c)

FIDUCIARY LIMITS OF MEAN & SD OF GENERAL KNOWLEDGE SCORES OBTAINED IN FIRST UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.27	53.12 - 58.13	52.32 - 58.92
SD	0.90	20.66 - 24.22	20.10 - 24.79

The .95 and .99 confidence limits for the means and SDs of General Knowledge scores in first Unit Test do not vary widely. This indicates a fairly high degree of significance of the sample statistics.

GENERAL KNOWLEDGE AND SEX IN FIRST UNIT TEST

TABLE 4.49(a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED IN FIRST
UNIT TEST FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	1.01	1.83
11 - 20	4.06	2.75
21 - 30	11.16	8.25
31 - 40	15.73	12.84
41 - 50	13.70	13.76
51 - 60	11.16	14.67
61 - 70	16.24	16.51
71 - 80	10.15	12.84
81 - 90	12.18	11.92
91 - 100	5.58	4.58

Figure 4.49 depicts the distribution of
General Knowledge scores obtained in First Unit Test for Boys
and Girls in the form of frequency polygons. The frequencies
are plotted as percentages.

G.K. (AT 1st U.T.) OF BOYS AND GIRLS

Fig. 4.49

366

FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS
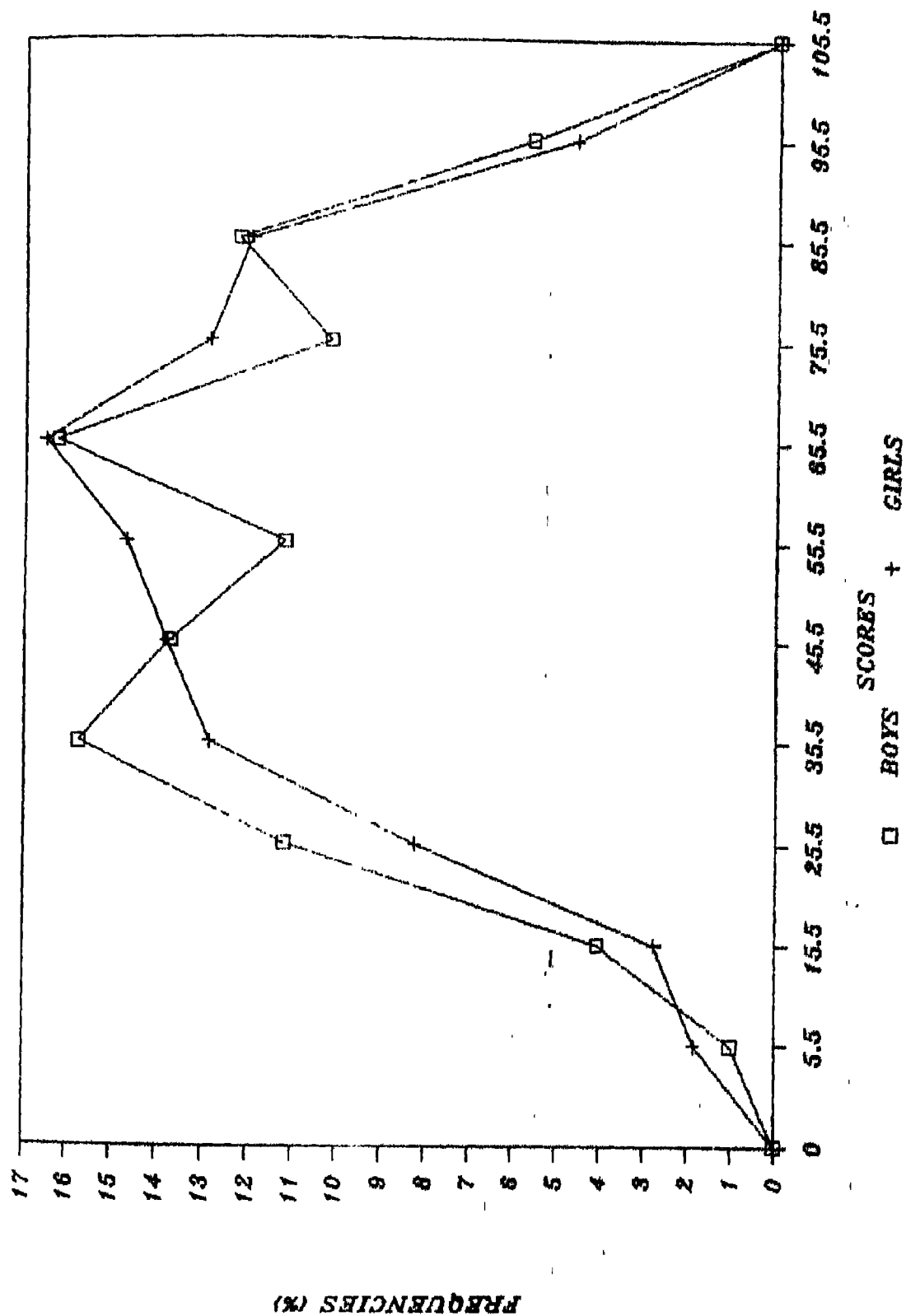
TABLE 4.49 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES IN THE
FIRST UNIT TEST FOR BOYS AND GIRLS

N	Mean	Median	Mode	SD	SK	Kur
Boys	54.94	54.36	53.20	22.84	0.076	0.301
Girls	56.69	57.68	59.67	21.83	-0.136	0.287

The distributions of General Knowledge scores among boys and girls in first unit test are almost normal with equal degree of variability. The distribution of boys is positively skewed and that of girls is negatively skewed. The distributions are platykurtic in nature.

TABLE 4.49 (c)

FIDUCIARY LIMITS OF M & SD OF GENERAL KNOWLEDGE SCORES
IN THE FIRST UNIT TEST FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	1.62	51.75 - 58.13	50.74 - 59.14
Girls	2.09	52.59 - 60.79	51.29 - 62.08

TABLE 4.49 (c) - Contd.

Group	SE of SD	.95	.99
Boys	1.15	20.58 - 23.11	19.86 - 23.82
Girls	1.48	18.92 - 24.74	18.00 - 23.66

From the entries in the above table it is clear that the General Knowledge scores for boys and girls in first unit test are almost normally distributed in the sample. The .95 and .99 confidence limits for General Knowledge in first unit test do not differ widely in their ranges implying the high degree of significance of statistics.

GENERAL KNOWLEDGE IN FIRST SEMESTER EXAM

TABLE 4.50 (a)

FREQUENCY DISTRIBUTION OF GENERAL KNOWLEDGE
SCORES OBTAINED IN FIRST SEMESTER EXAM
FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	4	4.33
11 - 20	9	13.33
21 - 30	27	19.33
31 - 40	22	29.00
41 - 50	38	37.00
51 - 60	51	53.67
61 - 70	72	55.67
71 - 80	44	43.67
81 - 90	15	23.33
91 - 100	26	13.67
Total	308	

Figure 4.50 gives the original and smoothed frequency polygons of General Knowledge scores obtained in First Semester Exam for the total sample.

G.K. (AT 1st S.E.) OF THE TOTAL SAMPLE

Fig. 4.9

□ ORIGINAL   + SMOOTHED

370
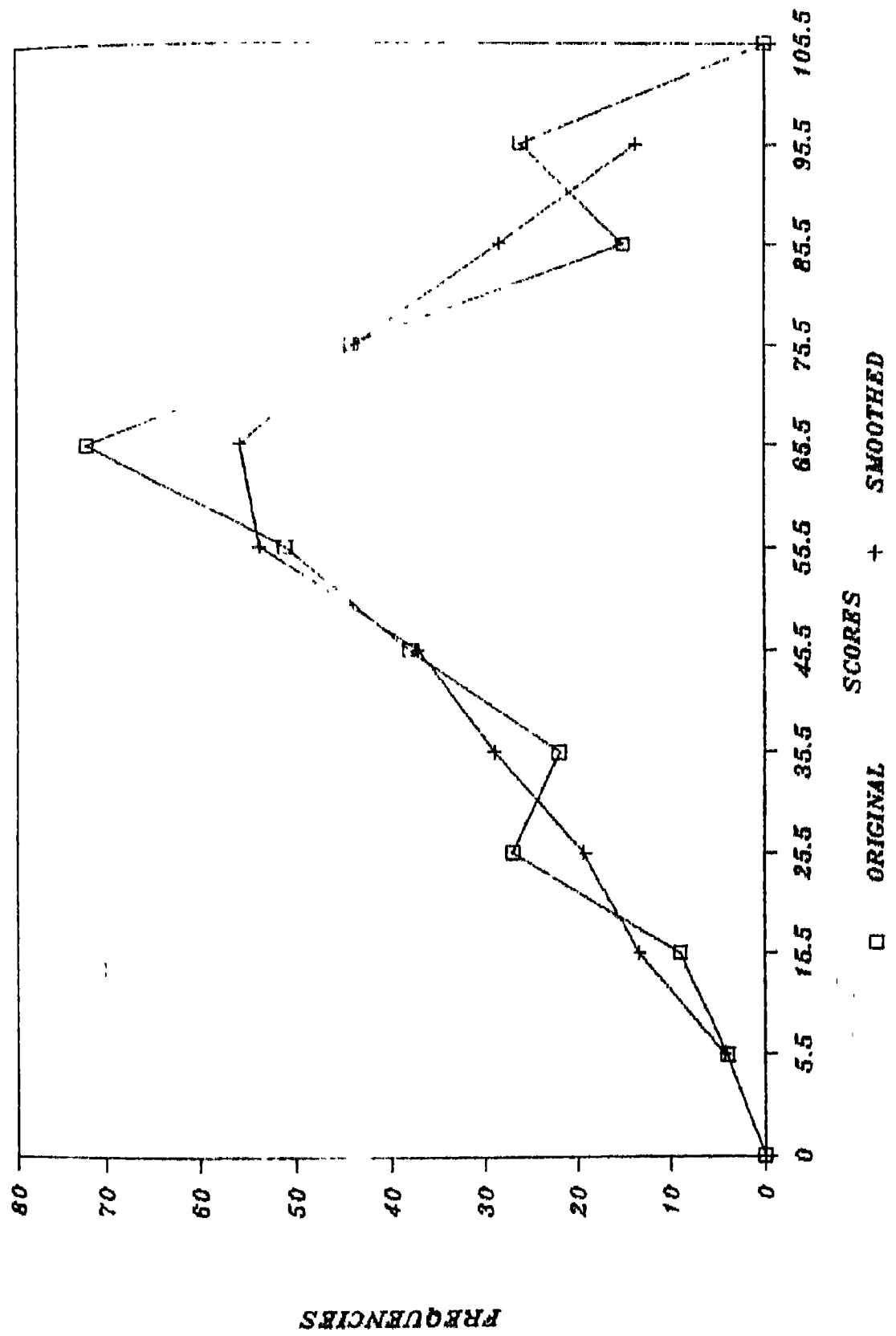
TABLE 4.50 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED IN
FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	58.42	60.91	65.90	21.21	-0.352	0.231

The distribution of General Knowledge scores for
the total sample in first semester exam is normally
distributed with a slight variability. The curve of the
distribution is negatively skewed and leptokurtic in nature.

TABLE 4.50 (c)

FIDUCIARY LIMITS OF MEAN & SD OF GENERAL KNOWLEDGE SCORES
OBTAINED IN FIRST SEMESTER EXAM FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.20	56.05 - 60.79	55.30 - 61.54
SD	0.85	19.52 - 22.89	18.99 - 23.42

The .95 and .99 confidence limits for the Means
and SDs of General Knowledge scores for the total sample in
the first semester exam are almost normally distributed in
the sample, and do not differ widely in their ranges implying
the high degree of significance of statistics.

GENERAL KNOWLEDGE AND SEX IN FIRST SEMESTER EXAM

TABLE 4.51 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED IN FIRST
SEMESTER EXAM FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	1.00	1.83
11 - 20	3.01	2.75
21 - 30	9.04	8.25
31 - 40	7.03	7.33
41 - 50	12.56	11.92
51 - 60	16.08	17.43
61 - 70	24.62	21.10
71 - 80	13.06	16.51
81 - 90	3.02	4.58
91 - 100	8.54	8.25

Figure 4.51 depicts the distribution of General
Knowledge scores obtained in first unit test for boys and
girls in the form of frequency polygons. The frequencies are
plotted as percentages.

Fig. 4.51

G.K. (AT 1st S.E.) OF BOYS AND GIRLS
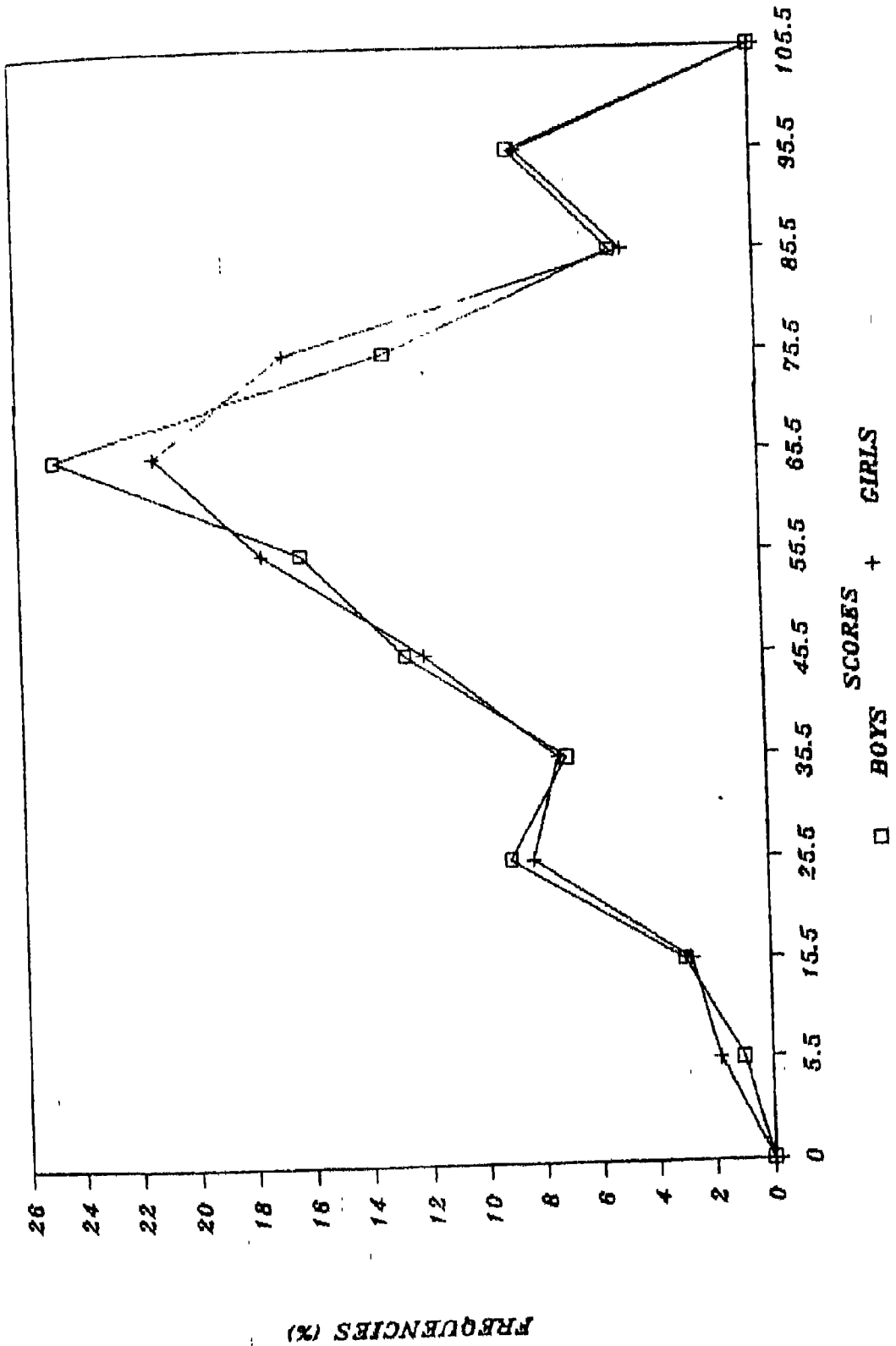
TABLE 4.51 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED
IN FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	58.41	61.01	66.20	21.11	-0.368	0.226
Girls	58.43	60.71	65.28	21.38	-0.320	0.239

The distribution of General Knowledge scores among boys and girls in the first semester exam are almost normal with equal degree of variability. The distributions are negatively skewed and leptokurtic in nature.

TABLE 4.51 (c)

FIDUCIARY LIMITS OF M & SD OF GENERAL KNOWLEDGE SCORES
OBTAINED IN FIRST SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.49	55.48 -	61.34	62.27 -	54.55
Girls	2.04	54.42 -	62.45	53.15 -	63.72

TABLE 4.51 (c) — Contd.

Group	SE of SD	.95		.99	
Boys	1.06	19.03 − 23.19		18.37 − 23.85	
Girls	1.45	18.53 − 24.23		17.63 − 25.14	

The .95 and .99 confidence intervals for the means and SDs of both the groups are comparatively narrow, which indicates the high dependability.

GENERAL KNOWLEDGE IN SECOND UNIT TEST

TABLE 4.52 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED IN
SECOND UNIT TEST FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	1.33
11 - 20	4	5.33
21 - 30	12	12.33
31 - 40	21	20.00
41 - 50	27	34.00
51 - 60	54	43.33
61 - 70	49	47.33
71 - 80	39	47.67
81 - 90	55	47.00
91 - 100	47	34.00
Total	308	

Figure 4.52 gives the original and smoothed
frequency polygons of General Knowledge scores obtained in
second unit test for the total sample.

G.K. (AT 2nd U.T.) OF THE TOTAL SAMPLE

Fig 4.52

□ ORIGINAL   +   SMOOTHED

SCORES

FREQUENCIES
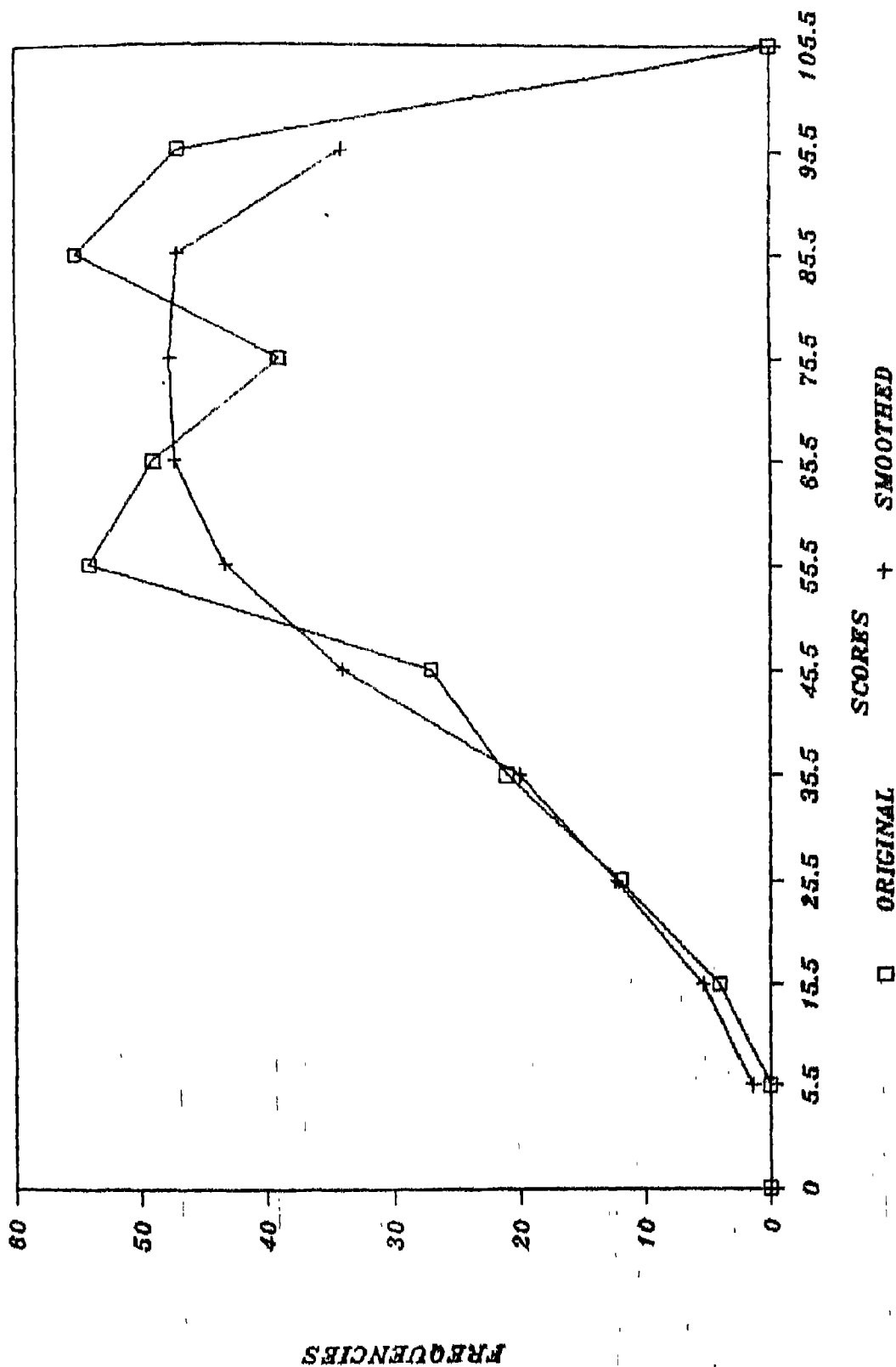
TABLE 4.52 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED
IN SECOND UNIT TEST FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	67.15	67.84	69.22	20.67	-0.100	0.284

The distribution of General Knowledge scores for the total sample in second unit test is fairly normal. The distribution is negatively skewed and platykurtic.

TABLE 4.52 (c)

FIDUCIARY LIMITS OF MEAN & SD OF GENERAL KNOWLEDGE SCORES
OBTAINED IN SECOND UNIT TEST FOR THE TOTAL SAMPLE

Statistic	SE	.95		.99	
Mean	1.17	64.84 -	69.46	64.11 -	70.19
SD	0.83	19.03 -	22.31	18.51 -	22.83

The .95 and .99 confidence limits for the Means and SDs of General Knowledge scores in second unit test have very narrow ranges. This implies that the sample statistics are dependable as true measures.

GENERAL KNOWLEDGE AND SEX IN SECOND UNIT TEST

TABLE 4.53 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED
IN SECOND UNIT TEST FOR BOYS AND GIRLS
IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0	0
11 - 20	1.50	0.90
21 - 30	4.52	2.75
31 - 40	6.03	8.25
41 - 50	9.04	8.25
51 - 60	19.09	14.67
61 - 70	15.07	17.43
71 - 80	13.56	11.00
81 - 90	19.59	14.67
91 - 100	11.55	22.01

Figure 4.53 depicts the distribution of General
Knowledge scores obtained in second unit test for boys and
girls in the form of frequency polygons. The frequencies are
plotted as percentages.

G.K. (AT 2nd U.T.) OF BOYS AND GIRLS

Fig. 4.53

380

FREQUENCIES (%)

SCORES

□ BOYS   + GIRLS
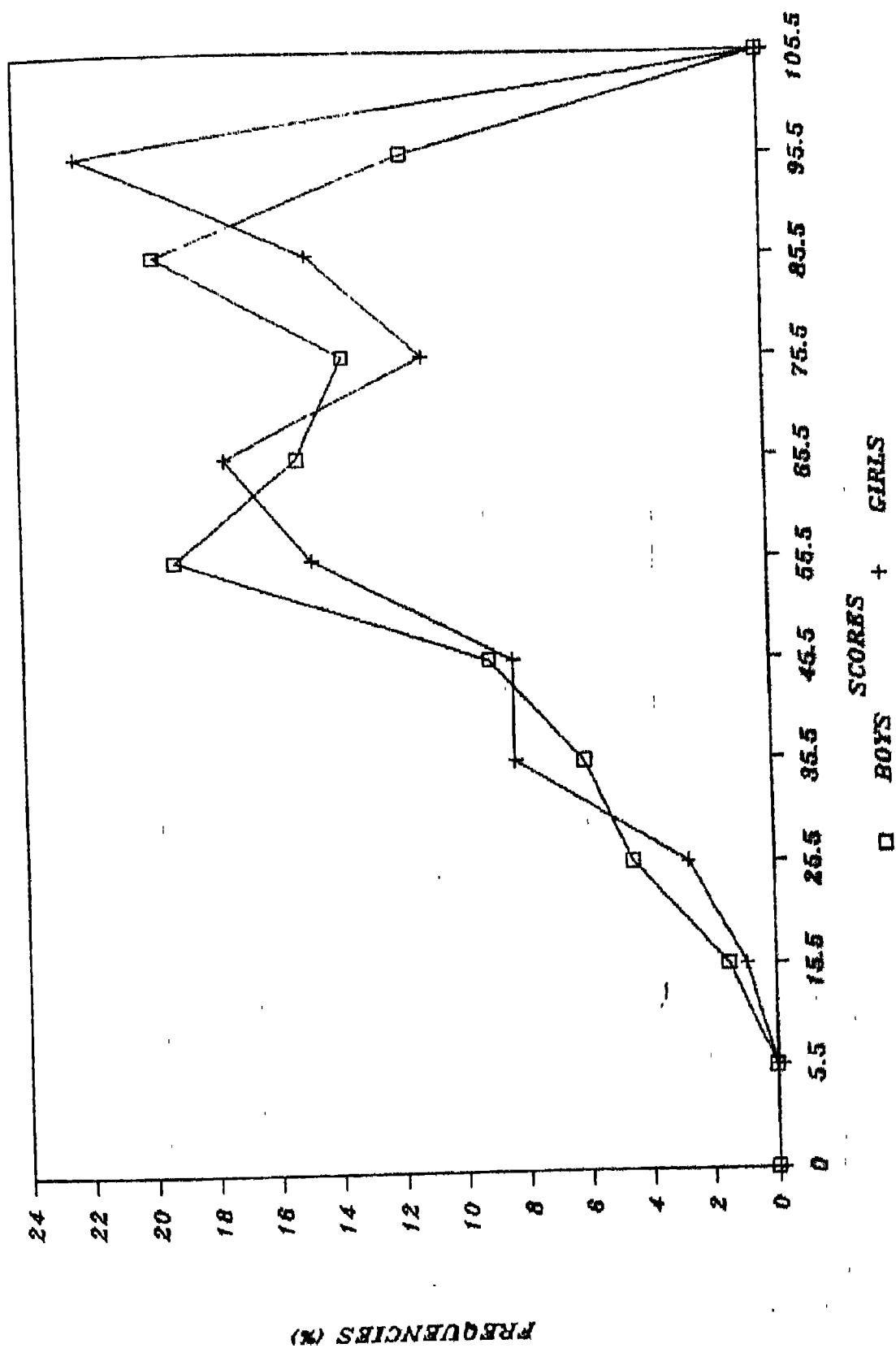
TABLE 4.53 (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED IN
SECOND UNIT TEST FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	66.15	67	68.69	20.37	- .124	.283
Girls	68.98	69.18	69.58	21.08	-0.028	.300

The distribution of General Knowledge scores for both boys and girls in the second unit test is fairly normal. The distributions are negatively skewed and platykurtic in nature.

TABLE 4.53 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SEX-WISE DISTRIBUTION
OF GENERAL KNOWLEDGE SCORES OBTAINED IN SECOND
UNIT TEST FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.44	63.32 -	68.98	62.42 -	69.87
Girls	2.01	65.02 -	72.94	63.77 -	74.19

TABLE 4.53 (c) - Contd.

Group	SE of SD	.95	.99
Boys	1.02	18.36 - 22.38	17.72 - 23.02
Girls	1.43	18.27 - 23.89	17.38 - 24.78

The .95 and .99 confidence limits for the Means and SDs of boys and girls are comparatively narrow which indicates the high dependability.

GENERAL KNOWLEDGE IN SECOND SEMESTER EXAM

TABLE 4.54 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED IN
SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	0
11 - 20	0	2.67
21 - 30	8	6.00
31 - 40	10	11.67
41 - 50	17	25.33
51 - 60	49	42.33
61 - 70	61	52.00
71 - 80	46	55.33
81 - 90	59	54.33
91 - 100	58	39.00
TOTAL	308	

Figure 4.54 gives the original and smoothed
frequency polygons of General Knowledge scores obtained in
second semester exam for the total sample.

G.K. (AT 2nd S.E.) OF THE TOTAL SAMPLE   Fig.4.54

384
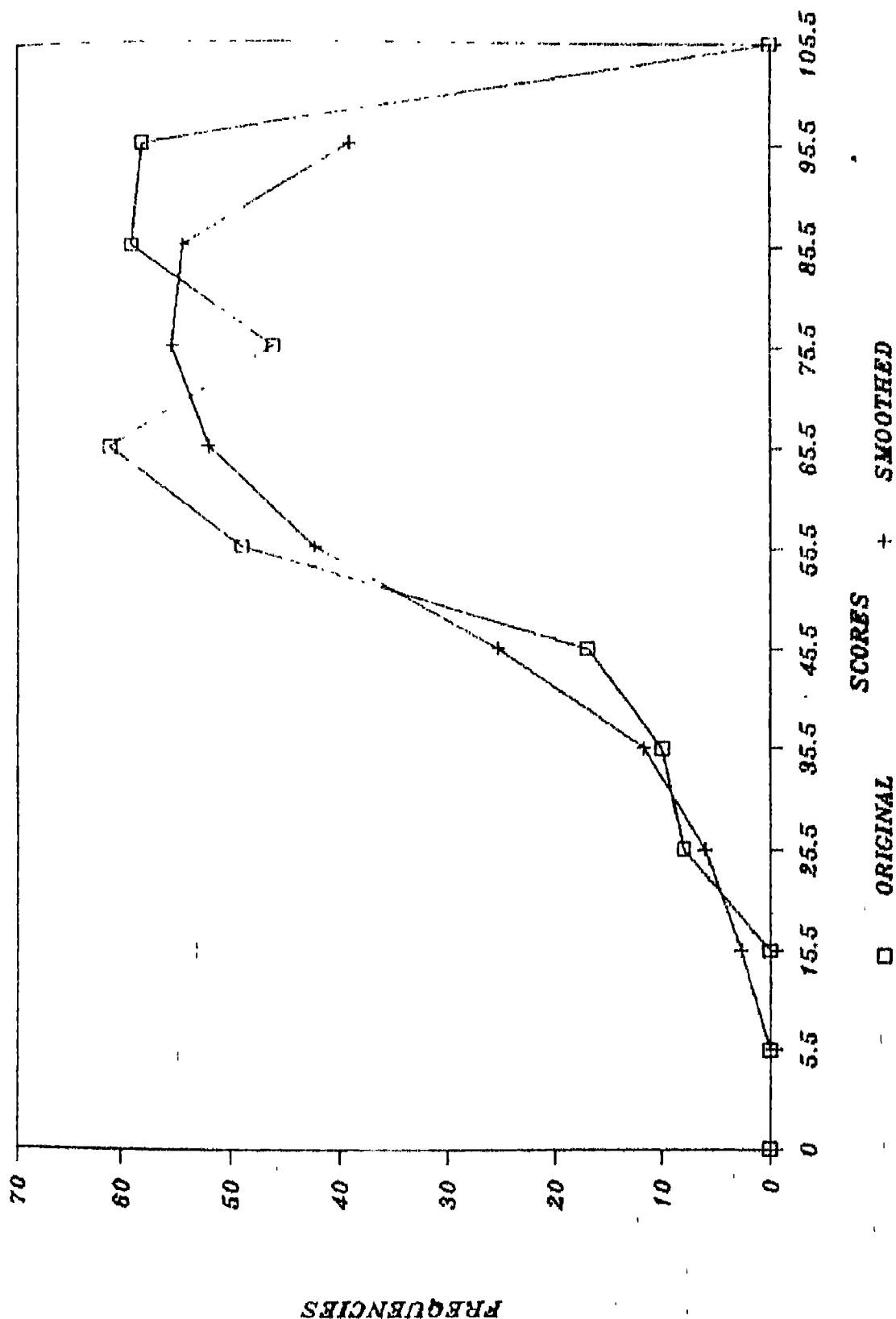
TABLE 4.54(b)

<u>RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED
IN SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE</u>

N	Mean	Median	Mode	SD	SK	Kurt
308	71.76	72.45	73.03	18.18	-0.113	0.299

The distribution of General Knowledge scores
among the total sample of children in second semester exam is
near normal. The skewness is negative and platykurtic in
nature.

TABLE 4.54 (c)

<u>FIDUCIARY LIMITS OF MEAN & SD OF GENERAL KNOWLEDGE SCORES
OBTAINED IN SECOND SEMESTER EXAM FOR THE TOTAL SAMPLE</u>

Statistic	SE	.95	.99
Mean	1.03	69.73 - 73.79	69.09 - 74.43
SD	0.73	16.73 - 19.62	16.28 - 20.07

The .95 and .99 confidence limits for the Means
and SDs of General Knowledge scores in second semester exam
do not exhibit wide range thus depicting the high degree of
significance of the sample statistics.

GENERAL KNOWLEDGE AND SEX IN SECOND SEMESTER EXAM

TABLE 4.55 (a)

DISTRIBUTION OF GENERAL KNOWLEDGE SCORES OBTAINED IN SECOND SEMESTER EXAM FOR BOYS AND GIRLS IN PERCENT FREQUENCIES

Scores	Boys F %	Girls F %
1 - 10	0	0
11 - 20	0	0
21 - 30	2.51	2.79
31 - 40	3.01	3.64
41 - 50	5.52	5.50
51 - 60	16.58	14.67
61 - 70	21.10	17.43
71 - 80	15.57	13.74
81 - 90	17.58	22.01
91 - 100	18.09	20.11

Figure 4.55 depicts the distribution of General Knowledge scores obtained in second semester exam for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

Fig.4.55

G.K. (AT 2nd S.E.) OF BOYS AND GIRLS

FREQUENCIES (%)

□ BOYS   + GIRLS
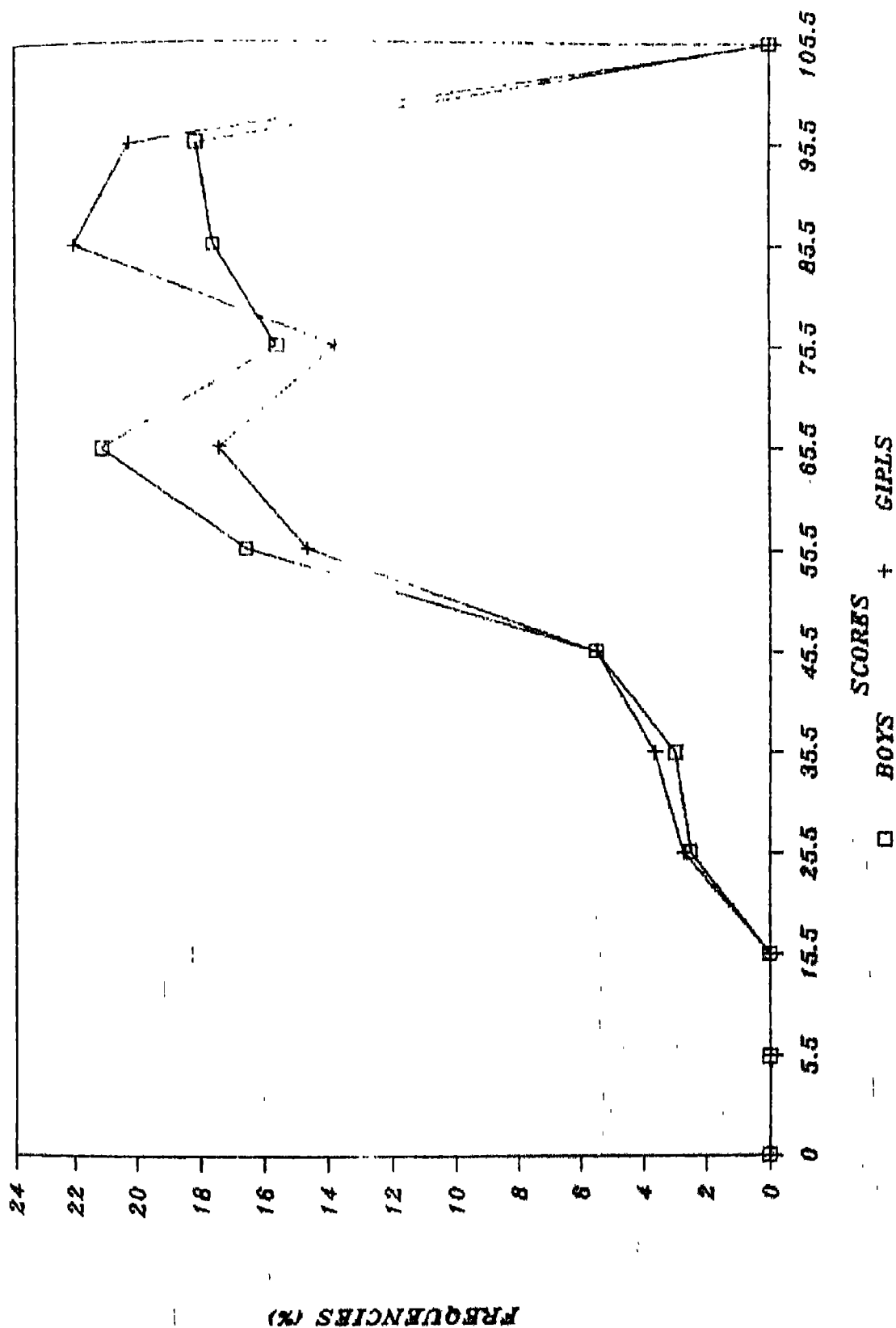
SCORES

TABLE 4.55   (b)

RELEVANT STATISTICS OF GENERAL KNOWLEDGE SCORES OBTAINED

IN SECOND SEMESTER EXAM FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	71.32	71.30	71.26	17.91	0.003	0.298
Girls	72.56	74.83	79.37	18.63	-0.365	0.197

The distribution of General Knowledge scores among boys and girls are almost normal. Girls distribution have negative skewness and the distribution of boys is positively skewed. Both the distributions are platykurtic in nature.

TABLE 4.55 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SEX-WISE DISTRIBUTION

OF GENERAL KNOWLEDGE SCORES OBTAINED IN SECOND

SEMESTER EXAM FOR BOYS AND GIRLS

Group	SEM	.95		.99	
Boys	1.26	68.84 - 73.81		68.05 - 74.60	
Girls	1.78	69.06 - 76.06		67.95 - 77.16	

TABLE 4.55 (c) - Contd.

Group	SE of SD	.95	.99
Boys	.90	16.14 - 19.67	15.58 - 20.23
Girls	1.26	16.15 - 21.12	15.36 - 21.90

The .95 and .99 confidence limits for both the sexes in second semester exam have fairly narrow ranges, denoting the high dependability of these sample statistics.

TABLE   4.56 (a)

DISTRIBUTION OF OTHER ACTIVITIES SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	2	7.00
11 - 20	19	3.00
21 - 30	41	33.00
31 - 40	39	44.30
41 - 50	53	48.60
51 - 60	54	48.30
61 - 70	30	40.30
71 - 80	29	29.30
81 - 90	21	20.60
91 -100	12	13.60
Total	308	

Figure   4.56 gives the original   and   smoothed
frequency polygons of other activities scores for the total
sample.

Fig. 4.56

O.A. OF THE TOTAL SAMPLE
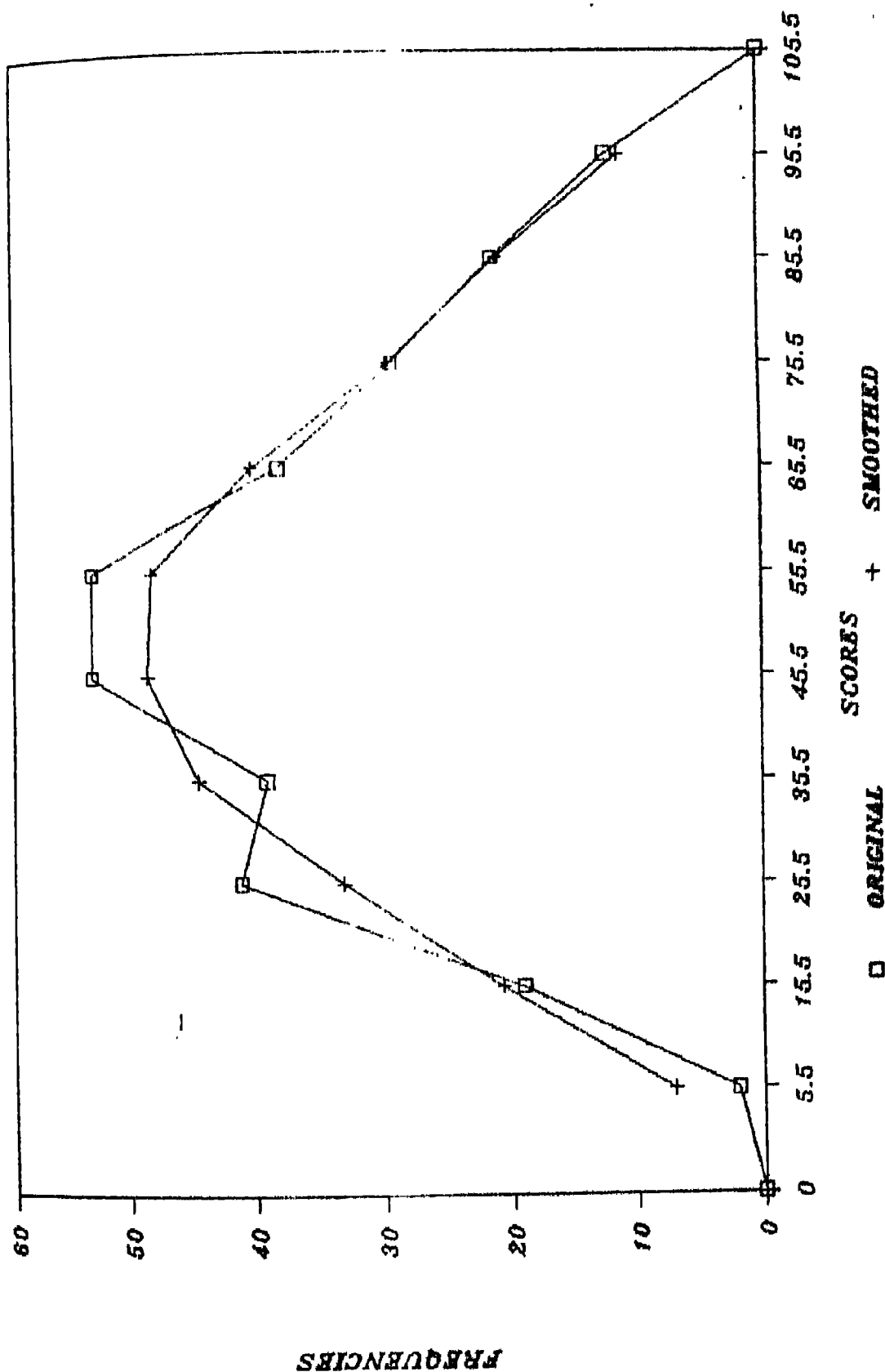
TABLE 4.56 (b)

RELEVANT STATISTICS OF OTHER ACTIVITIES SCORES
FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	51.18	50.5	49.14	21.39	0.095	0.275

The scores of Other Activities are normally distributed in the total sample. The curve is positively skewed and is platykurtic in nature.

TABLE 4.56 (c)

FIDUCIARY LIMITS OF MEAN & SD OF OTHER ACTIVITIES SCORES
FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.22	48.79 – 53.57	48.04 – 54.33
SD	0.87	19.70 – 23.09	19.16 – 23.63

The .95 and .99 confidence limits for the Means and SDs of other Activities scores do not exhibit a wide range. This supports the normality of distribution and also the high degree of significance of the sample statistics.

TABLE 4.57 (a)

DISTRIBUTION OF "SELF ATTRIBUTES" SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	1	4.60
11 - 20	13	15.60
21 - 30	33	33.60
31 - 40	55	52.30
41 - 50	53	53.00
51 - 60	51	49.60
61 - 70	45	45.00
71 - 80	39	32.60
81 - 90	14	19.00
91 - 100	4	6.00
	308	

Figure 4.57 gives the original and smoothed frequency polygons of "Self Attributes" scores for the total sample.

Fig. 4.57

S.A. OF THE TOTAL SAMPLE

FREQUENCIES

60 50 40 30 20 10 0

0 5.5 15.5 25.5 36.5 45.5 55.5 65.5 75.5 85.5 95.5 105.5

SCORES

□ ORIGINAL   + SMOOTHED

394
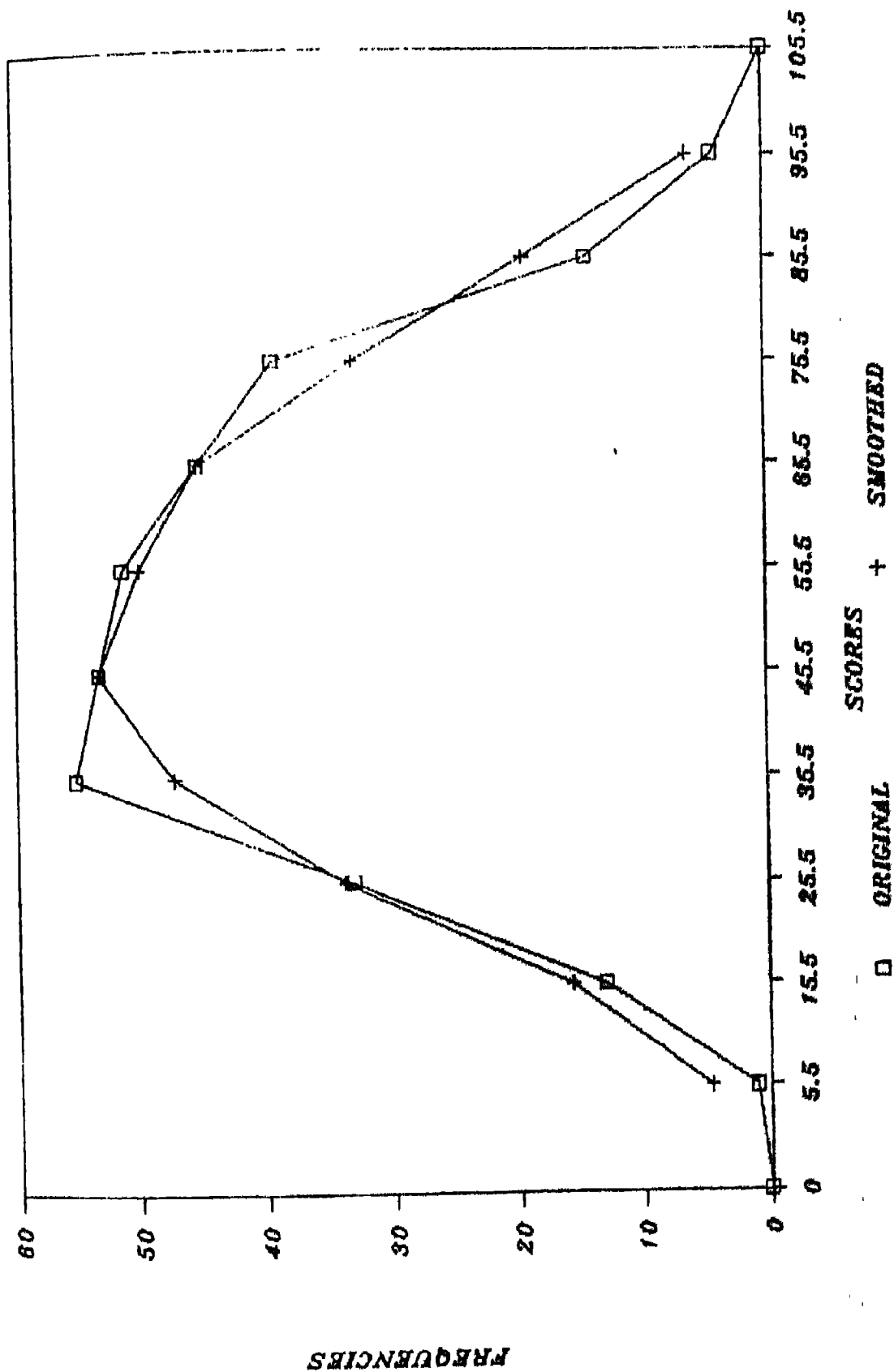
TABLE   4.57 (b)

RELEVANT STATISTICS OF "SELF ATTRIBUTES" SCORES

FOR   THE   TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	51.02	50.31	48.90	19.17	0.111	0.292

The   scores of "Self Attributes" for   the   total sample are distributed fairly normally.   The   skewness is positive and is platykurtic in nature.

TABLE 4.57 (c)

FIDUCIARY LIMITS OF MEAN & SD OF "SELF ATTRIBUTES" SCORES

FOR   THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.09	48.88 — 53.16	48.20 — 53.84
SD	0.78	17.65 — 20.69	17.17 — 21.17

The .95 and .99 confidence limits for the   Means and SDs of Self Attributes scores for the total sample   have very narrow ranges.   This implies the dependability of   the sample statistics as true measures.

TABLE 4.58 (a)

DISTRIBUTION OF PERSONAL DATA SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	1.00
11 - 20	3	27.30
21 - 30	27	27.30
31 - 40	52	41.00
41 - 50	44	52.30
51 - 60	61	53.00
61 - 70	54	60.60
71 - 80	67	40.30
TOTAL	308	

Figure 4.58 gives the original and smoothed frequency polygons of Personal Data scores for the total sample.

Fig. 4-58

P.D. OF THE TOTAL SAMPLE

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES
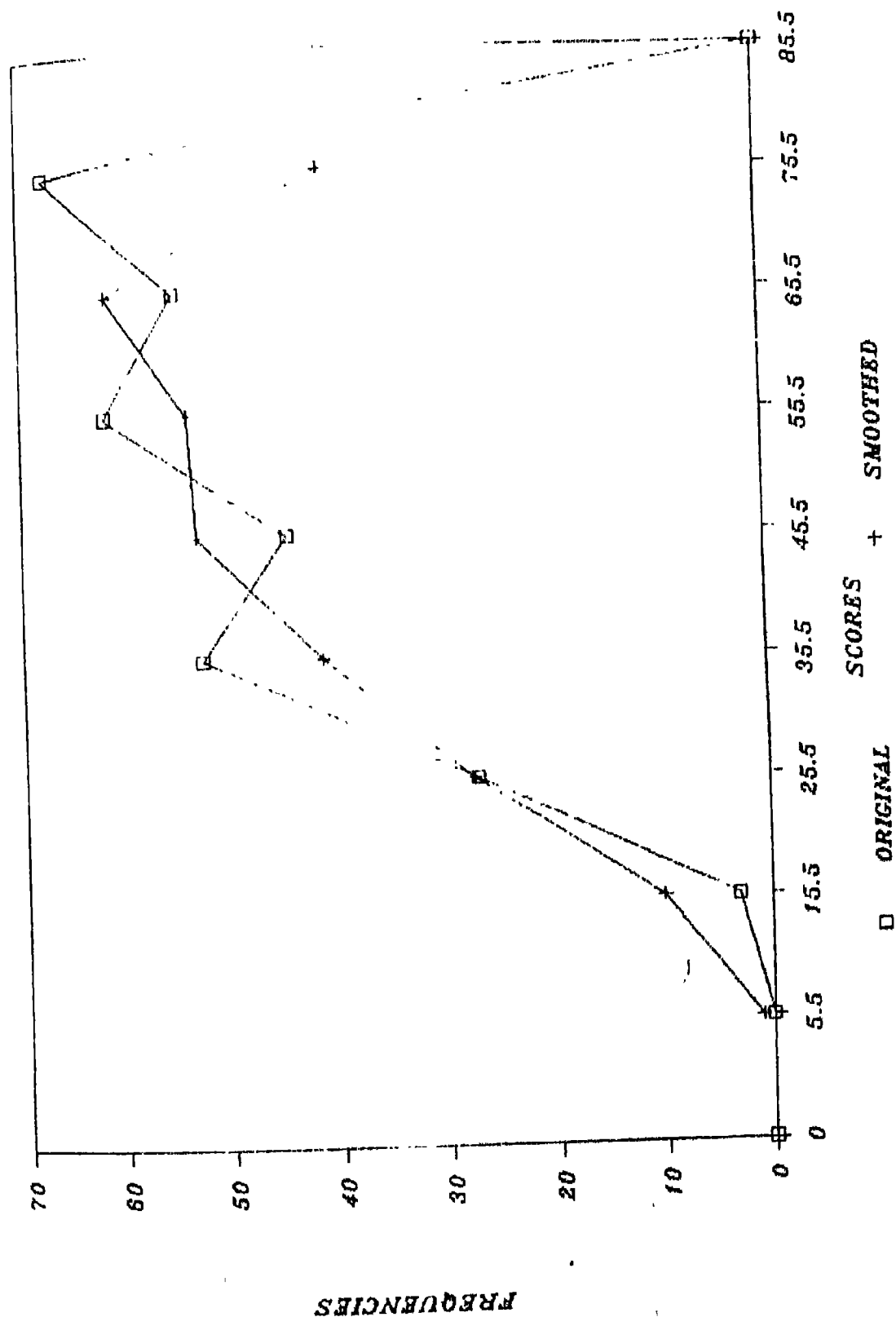
TABLE 4.58 (b)

RELEVANT STATISTICS OF PERSONAL DATA SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	53.78	55.09	57.71	16.67	-0.236	0.322

The Personal data scores for the total sample are fairly normally distributed. The skewness is negatively curved and is platykurtic in nature.

TABLE 4.58 (c)

FIDUCIARY LIMITS OF M & SD OF PERSONAL DATA SCORES
FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	0.95	51.92 - 55.64	51.33 - 56.23
SD	0.67	15.35 - 17.99	14.93 - 18.41

The .95 and .99 confidence limits for the Means and SDs of Personal Data scores for the total sample have narrow ranges implying the dependability of sample statistics as true measures.

TABLE 4.59 (a)

DISTRIBUTION OF "MENTAL ABILITIES" SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	2	3.60
11 - 20	9	16.00
21 - 30	37	30.30
31 - 40	45	45.30
41 - 50	54	56.60
51 - 60	71	52.60
61 - 70	33	41.60
71 - 80	21	27.00
81 - 90	27	17.30
91 - 100	4	15.00
101 - 110	5	3.00
111 - 120	0	1.60

308

Figures 4.59 gives the original and smoothed frequency polygons of Mental Abilities scores for the total sample.

M.A. OF THE TOTAL SAMPLE

Fig. 4.59

400

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES
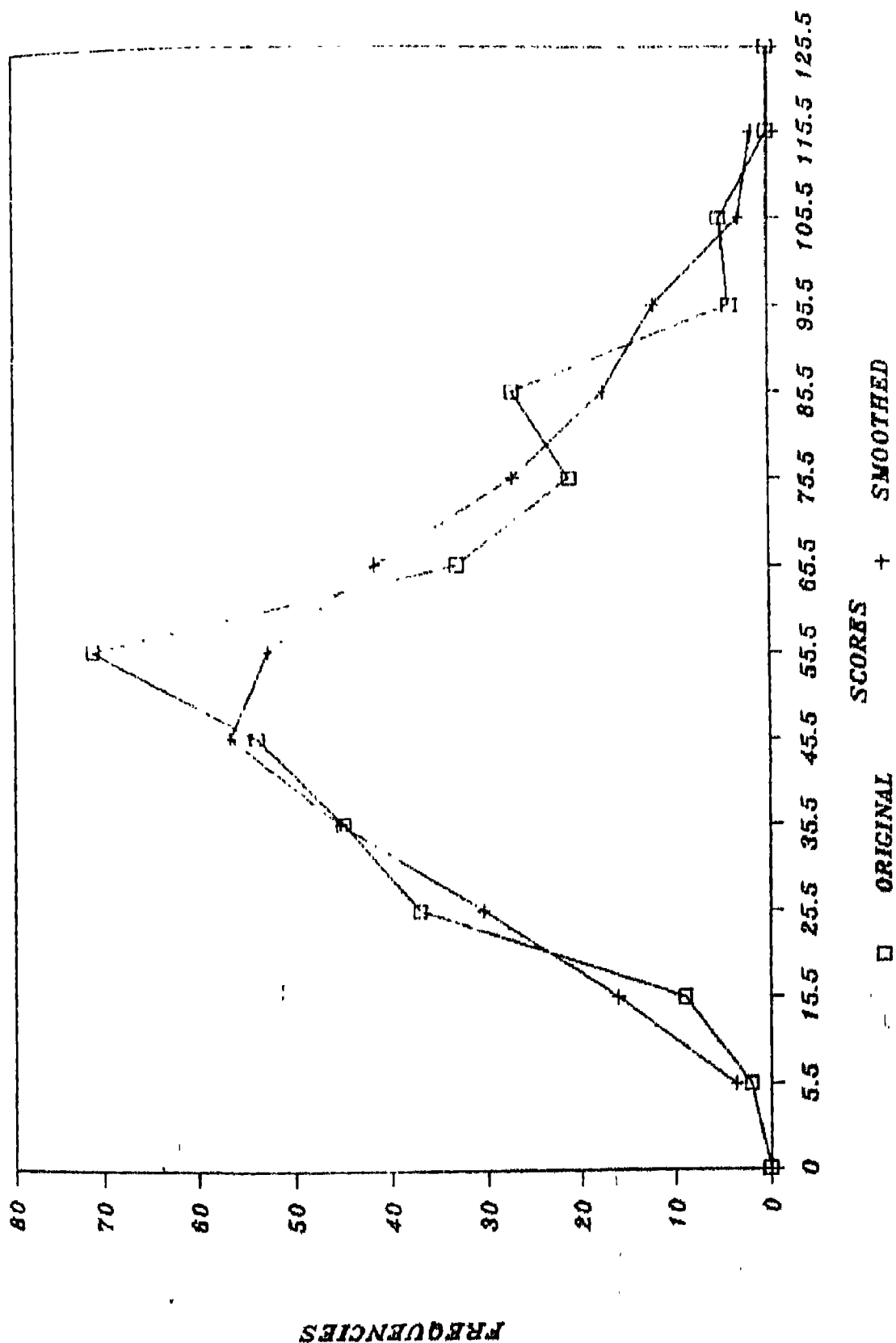
TABLE 4.59 (b)

RELEVANT STATISTICS OF MENTAL ABILITIES SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	52.12	51.49	50.21	20.35	0.093	0.243

The distribution of Mental Abilities scores for the total sample are almost normal. The skewness is positive and is leptokurtic in nature.

TABLE 4.59 (c)

FIDUCIARY LIMITS OF MEAN & SD OF MENTAL ABILITIES SCORES

FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	1.16	49.85 - 54.40	49.13 - 55.11
SD	0.83	18.73 - 21.96	18.22 - 22.47

The .95 and .99 confidence limits of the Mental Abilities scores for the total sample have fairly narrow-ranges, denoting the high dependability of these sample statistics.

TABLE 4.60 (a)

FREQUENCY DISTRIBUTION OF SOCIAL SKILLS SCORES
FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	0	6.30
11 - 20	19	18.30
21 - 30	36	37.30
31 - 40	57	51.60
41 - 50	62	54.00
51 - 60	43	52.30
61 - 70	52	44.60
71 - 80	39	44.60
	308	

Figure 4.60 gives the original and smoothed frequency polygons of social skills scores for the total sample.

S.S. OF THE TOTAL SAMPLE

Fig 4.60

4.03

FREQUENCIES

SCORES

□ ORIGINAL   + SMOOTHED
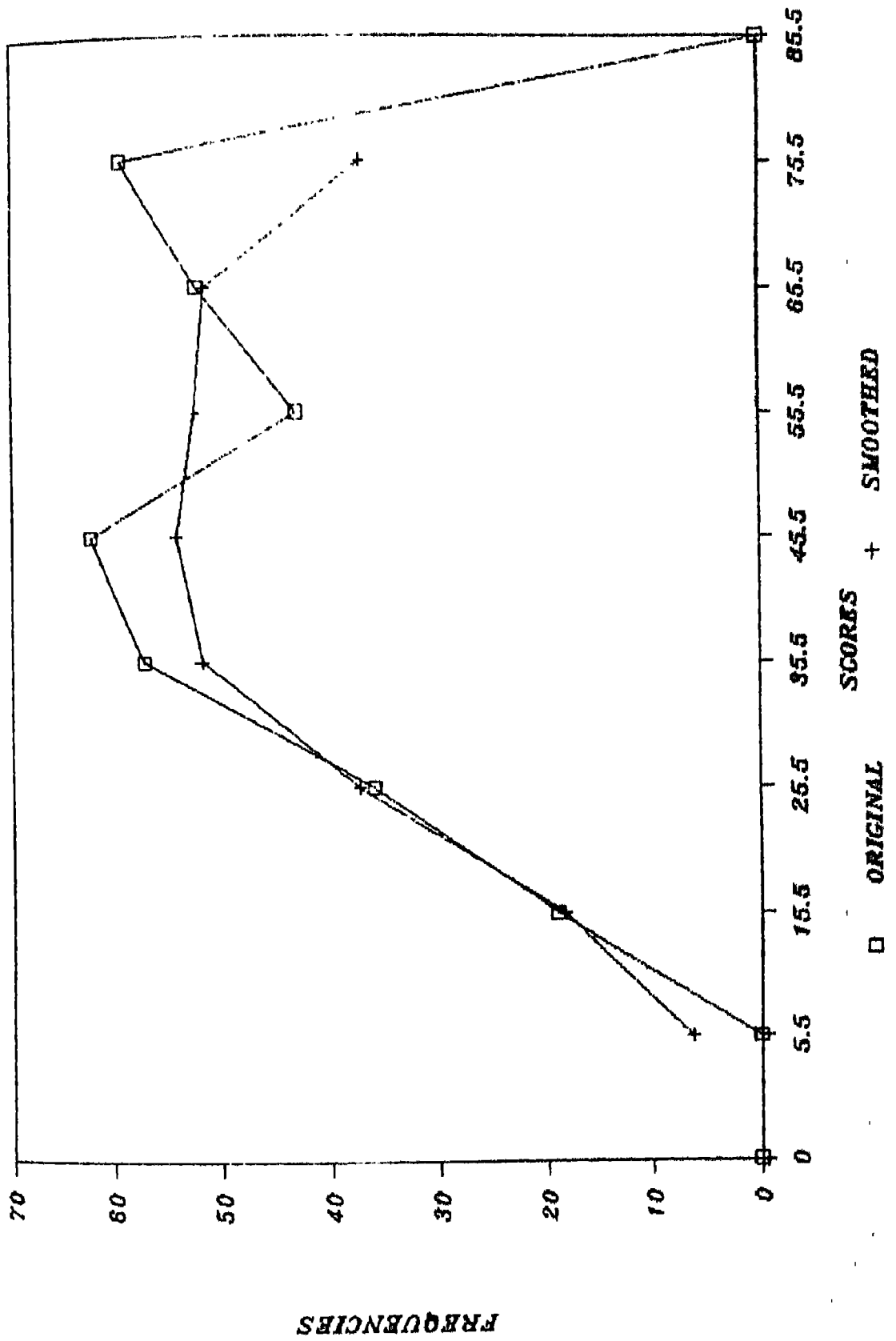
TABLE 4.60 (b)

RELEVANT STATISTICS OF SOCIAL SKILLS SCORES
FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	48.03	47.77	45.76	17.60	0.129	0.295

The distribution of social skills scores among the total sample of children is near normal. The distribution is positively skewed and is platykurtic.

TABLE 4.60 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SOCIAL SKILLS SCORES
FOR THE TOTAL SAMPLE

Statistics	SE	.95	.99
Mean	1.02	46.07 - 49.99	45.44 - 50.62
SD	0.71	16.21 - 18.99	15.76 - 19.44

The .95 and .99 Fiduciary intervals of Means and SDs of Social Skills scores among the total sample of children do not vary broadly, implying a high dependability of the sample statistics as true measures.

TABLE 4.61 (a)

DISTRIBUTION OF PERSONALITY TRAITS SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 10	4	8.30
11 - 20	21	19.30
21 - 30	33	40.30
31 - 40	67	51.30
41 - 50	55	42.60
51 - 60	32	27.00
61 - 70	41	27.00
71 - 80	29	16.30
81 - 90	11	13.00
91 - 100	9	8.60
101 - 110	6	5.00
111 - 120	0	2.00

308

Figure 4.61 gives the original and smoothed frequency polygons of personality Traits scores for the total sample.
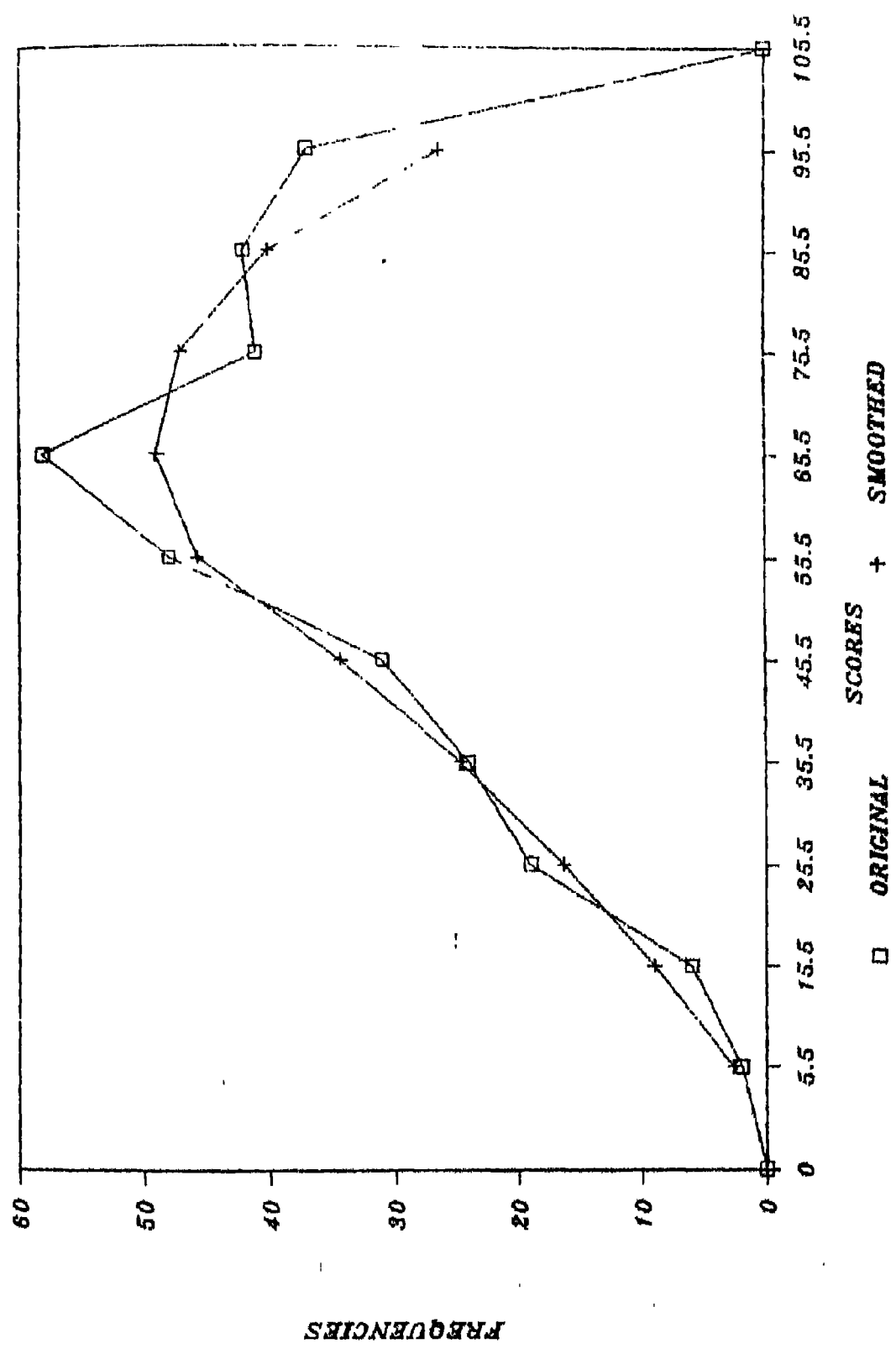
P.T. OF THE TOTAL SAMPLE

Fig.4.61

□ ORIGINAL   + SMOOTHED

SCORES

FREQUENCIES
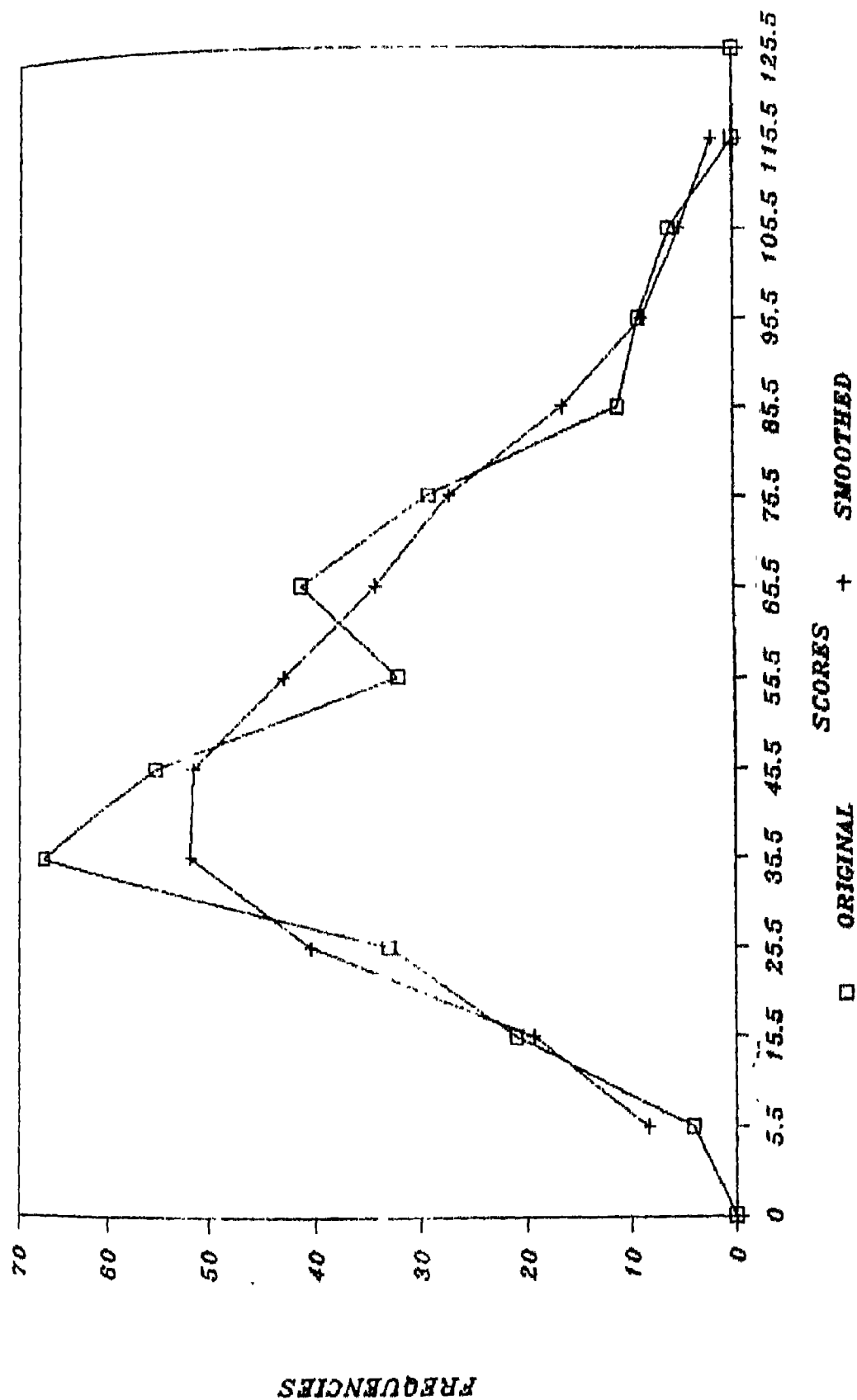
TABLE 4.61 (b)

RELEVANT STATISTICS OF PERSONALITY TRAITS SCORES
FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	49.20	45.77	38.92	21.95	0.469	0.281

The distribution of Personality Traits scores for the total sample is normal with a slight variability. The curve of the distribution is positively skewed and is platykurtic in nature.

TABLE 4.61 (c)

FIDUCIARY LIMITS OF MEAN & SD OF PERSONALITY TRAITS SCORES
FOR THE TOTAL SAMPLE

Statistics	SE	.95	.99
Mean	1.25	46.75 - 51.65	45.97 - 52.43
SD	0.89	20.21 - 23.69	19.66 - 24.24

The .95 and .99 confidence limits for the Means and SDs of Personality Traits scores for the total sample do not vary widely thus indicating a high degree of significance of the sample statistics.

TABLE 4.62 (a)

DISTRIBUTION OF KNOWLEDGE OF ENGLISH SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 2	26	20.00
3 - 4	34	40.30
5 - 6	61	50.30
7 - 8	56	66.30
9 - 10	82	62.30
11 - 12	49	43.60
TOTAL	308	

Figure 4.62 gives the original and smoothed frequency polygons of Knowledge of English scores for the total sample.

K.E. OF THE TOTAL SAMPLE

Fig 4.62

FREQUENCIES

SCORES   □ ORIGINAL   + S.M.F.
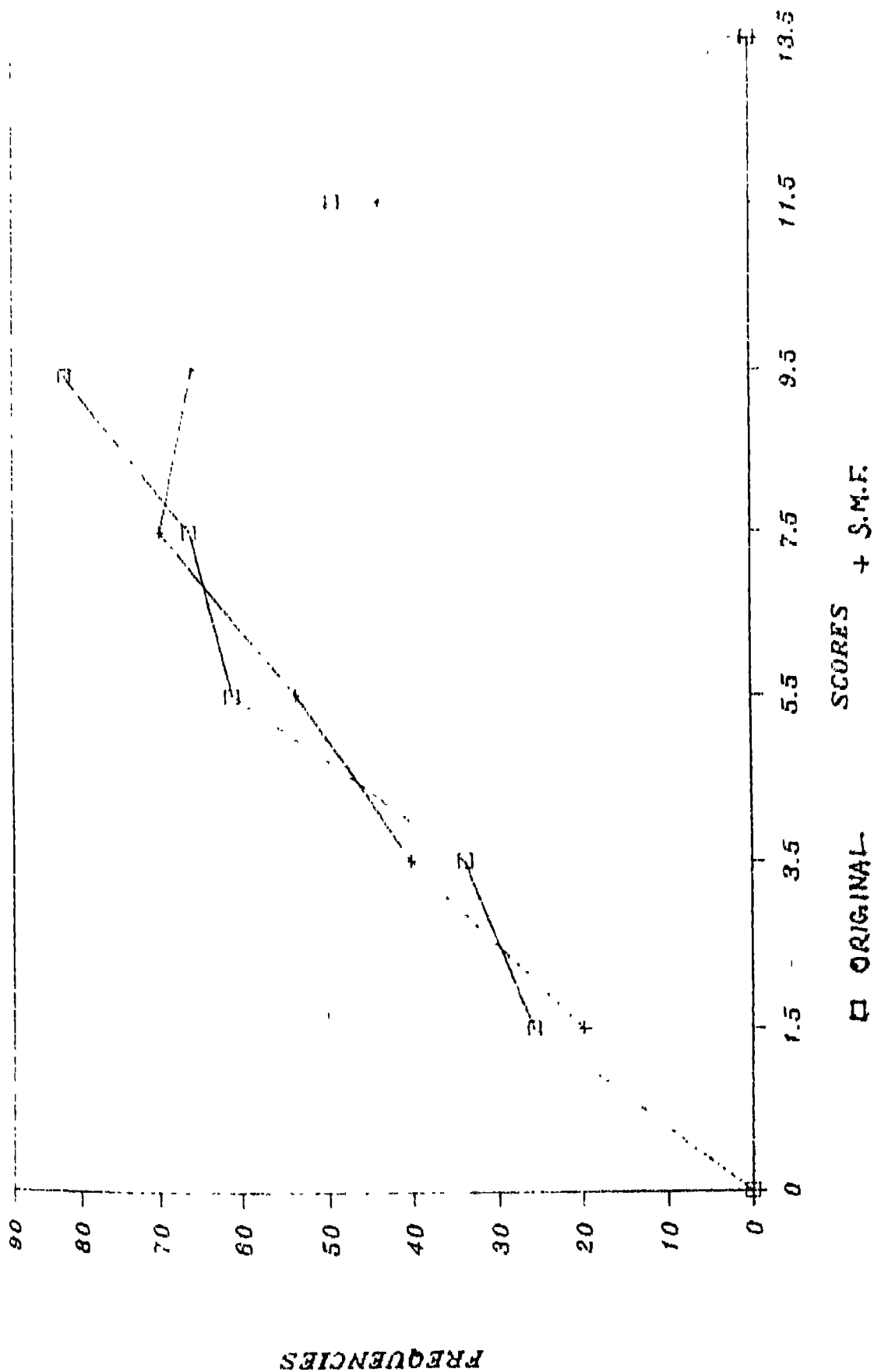
TABLE 4.62 (b)

RELEVANT STATISTICS OF K.E. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
308	7.32	7.68	8.39	3.03	-0.356	0.281

The distribution is near normal and negatively skewed. The curve is platykurtic in nature.

TABLE 4.62 (c)

FIDUCIARY LIMITS OF MEAN & SD OF K.E. SCORES

FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	0.17	6.99 - 7.66	6.88 - 7.7
SD	0.12	2.79 - 3.27	2.71 - 3.35

The .95 and .99 fiduciary intervals of the mean and SD of K.E. scores for the total sample are fairly narrow in their ranges. This signifies that the estimated statistics are dependable as true measures.

TABLE 4.63 (a)

DISTRIBUTION OF KNOWLEDGE OF ENGLISH
SCORES FOR BOYS AND GIRLS

Scores	Boys F %	Girls F %
1 - 2	9.55	6.42
3 - 4	12.57	8.26
5 - 6	21.11	17.43
7 - 8	17.09	20.18
9 - 10	24.12	31.19
11 - 12	15.58	16.51

Figure 4.63 depicts the distribution of Knowledge of English scores for boys and girls in the form of frequency polygons. The frequencies are plotted as percentages.

K.E. OF BOYS AND GIRLS

□ BOYS   ◇ GIRLS

SCORES

FREQUENCIES (%)

Fig.4.63

4.12.
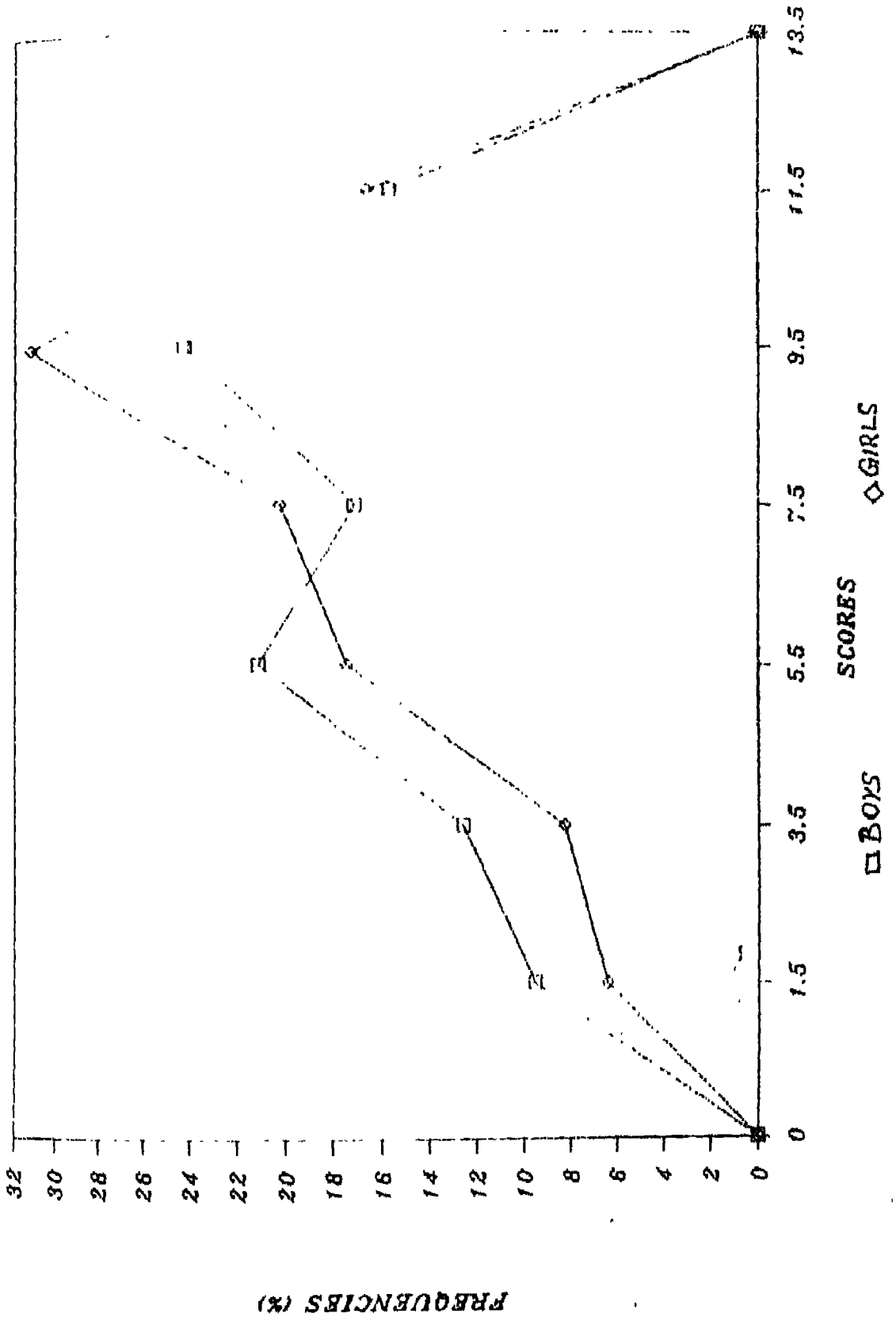
TABLE 4.63 (b)

RELEVANT STATISTICS OF K.E. SCORES

FOR BOYS AND GIRLS

Groups	Mean	Median	Mode	SD	SK	Kur
Boys	7.11	7.29	7.67	3.10	-0.174	0.286
Girls	7.72	8.27	9.38	2.86	-0.577	0.270

The distributions of K.E. scores among the Boys and Girls are near normal. The polygons have negative skewness and both have platykurtic distribution.

TABLE 4.63 (c)

FIDUCIARY LIMITS OF MEAN & SD OF K.E. SCORES

FOR BOYS AND GIRLS

Group	SEM	.95	.99
Boys	0.22	6.68 - 7.54	6.54 - 7.67
Girls	0.27	7.18 - 8.26	7.01 - 8.43
SE OF SD			
Boys	0.16	2.79 - 3.40	2.70 - 3.50
Girls	0.19	2.48 - 3.24	2.36 - 3.36

The fiduciary limits of mean and SD for the K.E. scores of both the sample i.e. Boys and Girls have fairly narrow ranges. This indicates that the population parameters are fairly dependable as true measures.

S.R. AND HOME BACKGROUND

TABLE 4.64 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES ON THE BASIS OF EDUCATION OF PARENTS FOR THE TOTAL SAMPLE IN PERCENT FREQUENCIES

S.R. Scores	Highly Educated % F	Moderately Educated % F	Low In Education % F
1 - 10	0	2.36	8.63
11 - 20	0	8.66	7.19
21 - 30	4.76	11.81	24.46
31 - 40	7.14	9.45	10.07
41 - 50	9.52	15.74	20.86
51 - 60	16.66	23.62	19.42
61 - 70	21.43	8.66	2.15
71 - 80	14.28	11.81	5.75
81 - 90	16.66	7.08	1.43
91 - 100	9.52	0.78	0

Figure 4.64 depicts the distribution of scholastic Readiness scores on the basis of Education of Parents for the total sample in the form of frequency polygons. The frequencies are plotted as percentages.

S'.R. AND PARENTS' EDUCATION

Fig. 4.64

4.15

FREQUENCIES (%)

SCORES

□ High Edn + Moderate Edn ◇ Lower Edn
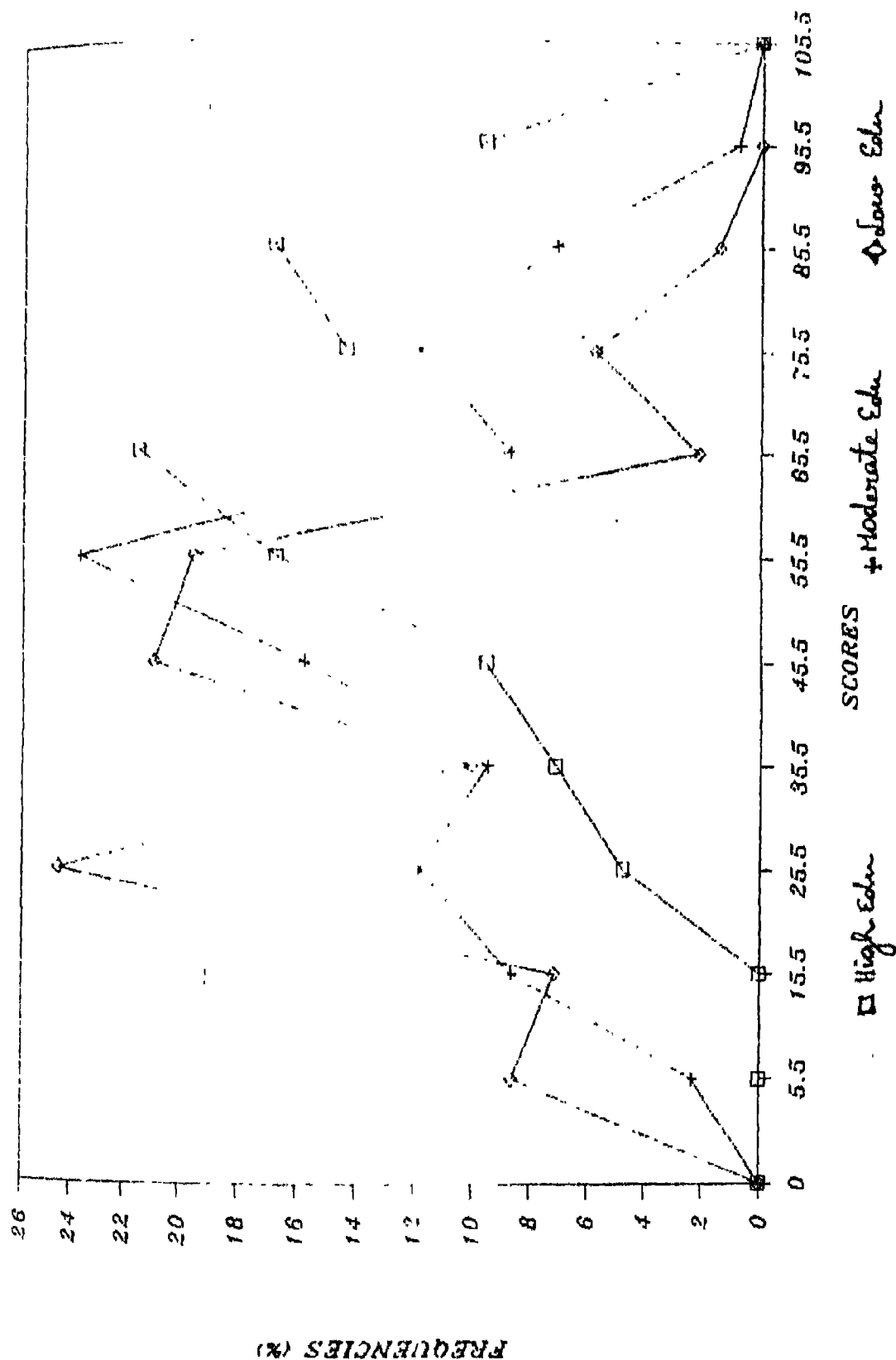
TABLE 4.64 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES AND EDUCATION OF PARENTS FOR THE TOTAL SAMPLE

Groups	Mean	Median	Mode	SD	SK	Kur
Highly Educated	65.5	66.05	67.17	19.02	-0.087	0.272
Moderately Educated	49.51	51.33	54.97	21.30	-0.256	0.265
Low In Education	38.66	40.14	43.09	19.15	-0.232	0.295

The scores of Scholastic Readiness are almost normally distributed in the different groups of "Education of Parents". All the curves are negatively skewed and are platykurtic.

TABLE 4.64 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS SCORES ON THE BASIS OF EDUCATION OF PARENTS FOR THE TOTAL SAMPLE

Group	SEM	.95		.99	
Highly Educated	2.93	59.74 - 71.25		57.92 - 73.07	
Moderately Educated	1.89	45.81 - 53.22		44.63 - 54.39	
Low In Education	1.62	35.48 - 41.85		34.47 - 42.85	

TABLE 4.64 (c) - Contd.

Group	SE OF SD	.95	.99
High in Education	2.08	14.94 - 23.11	13.65 - 24.40
Moderate in Education	1.34	18.67 - 23.94	17.84 - 24.77
Low in Education	1.15	16.89 - 21.41	16.17 - 22.13

The .95 and .99 confidence limits for the Means and SDs of Scholastic Readiness scores in the different groups of "Education of Parents" exhibit slightly wide ranges with "High Group" varying more than the other two.

TABLE 4.65 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES ON THE
BASIS OF MOTHER'S EDUCATION FOR THE TOTAL
SAMPLE IN PERCENT FREQUENCIES

Scores	High In Education	Moderate In Education	Low In Education
1 - 10	0	0	9.14
11 - 20	0	7.21	7.92
21 - 30	0	6.30	26.83
31 - 40	6.06	10.81	9.14
41 - 50	3.03	19.82	18.29
51 - 60	15.15	24.32	19.51
61 - 70	18.18	11.71	2.44
71 - 80	24.24	10.81	5.48
81 - 90	21.21	8.11	1.21
91 - 100	12.12	0.90	0

Figure 4.65 shows the distribution of Scholastic
Readiness scores on the basis of Mother's Education for the
total sample in the form of frequency polygons. The
frequencies are plotted as percentages.

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S.R. AND MOTHERS' EDUCATION

Fig.4.65
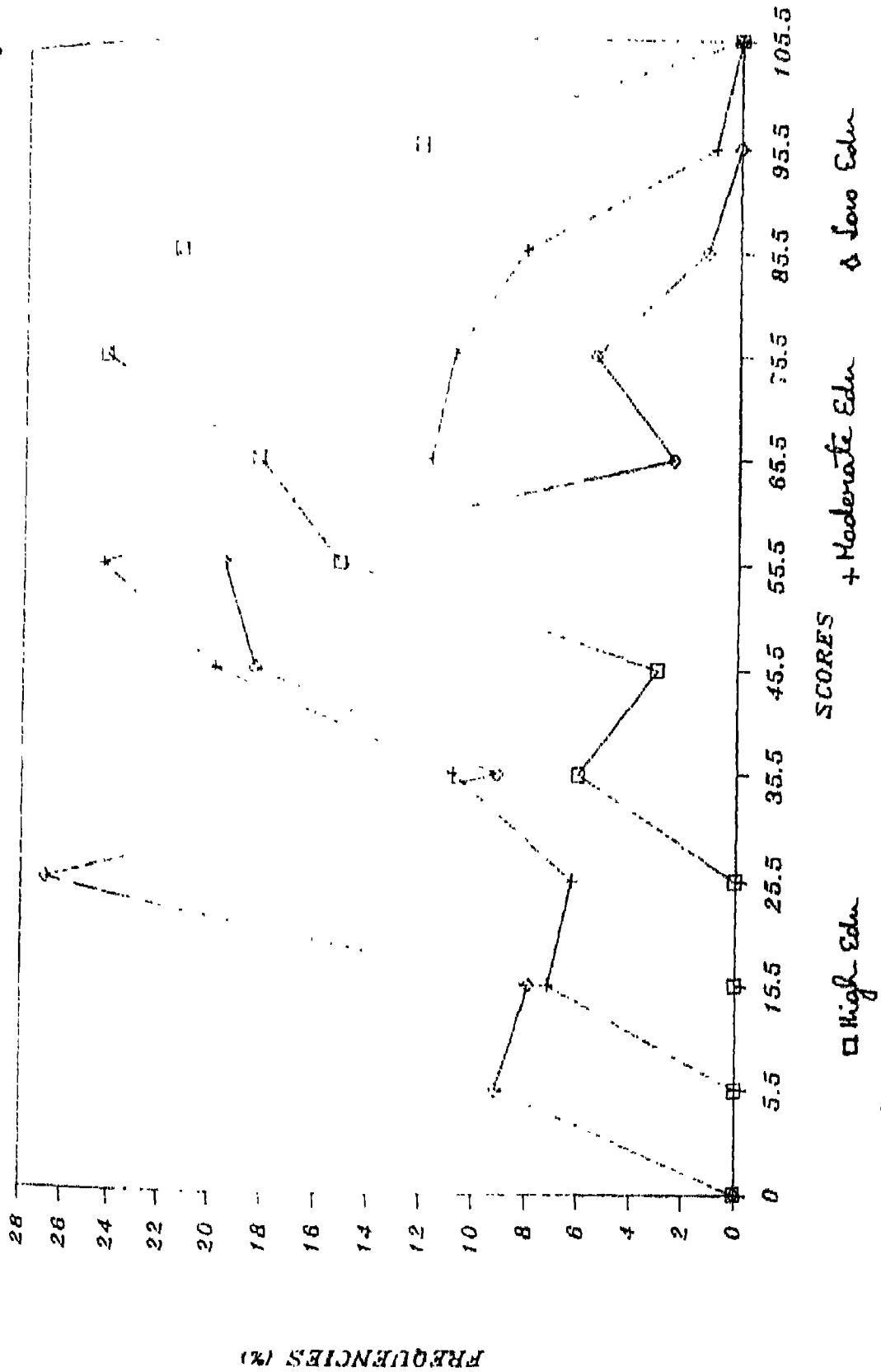
TABLE 4.65 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES AND

MOTHER'S EDUCATION FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
High In Education	71.86	73.62	77.14	16.10	-0.328	0.285
Moderate In Education	52.70	52.90	53.30	19.22	-0.031	0.230
Low In Education	37.75	37.16	35.98	19.29	0.092	0.298

The distribution of Scholastic Readiness scores are almost normal in the different groups of Mother's education. Excepting in the low group which is positively skewed the other two are negatively skewed.

TABLE 4.65 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS

SCORES ON THE BASIS OF MOTHER'S EDUCATION

FOR THE TOTAL SAMPLE

Group	SEM	.95	.99
High In Education	2.80	66.36 — 77.35	64.62 — 79.09
Moderate In Education	1.82	49.13 — 56.28	47.99 — 57.41
Low in Education	1.50	34.80 — 40.70	33.86 — 41.64

TABLE 4.65 (c) - Contd.

Group	SE OF SD	.95	.99
High In Education	1.99	12.20 - 20.01	10.97 - 21.24
Moderate In Education	1.29	16.68 - 21.76	15.88 - 22.56
Low In Education	1.06	17.19 - 21.39	16.53 - 22.05

The .95 and .99 confidence limits for the Means and SDs of Scholastic Readiness Scores in the different groups exhibit wide range. This could be because of the smallness of the sample.

TABLE 4.66 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES ON THE

BASIS OF FATHER'S EDUCATION FOR THE TOTAL

SAMPLE IN PERCENT FREQUENCIES

Scores	High In Education	Moderate In Education	Low In Education
1 - 10	0	4.28	7.56
11 - 20	0	10.71	5.04
21 - 30	10.20	15.71	20.17
31 - 40	8.16	8.57	10.9.
41 - 50	12.24	12.86	24.36
51 - 60	18.37	22.14	20.17
61 - 70	22.44	5.71	3.36
71 - 80	10.20	12.14	5.88
81 - 90	12.24	6.42	2.52
91 - 100	6.12	1.43	0

Figure 4.66 presents the distribution of Scholastic Readiness Scores on the basis of Father's Education for the total sample in the form of frequency polygons. The frequencies are plotted as percentages.

S.R. AND FATHERS' EDUCATION   Fig. 4.66

□ High Edn   + Moderate Edn   ◇ Low Edn

SCORES

FREQUENCIES (%)

4-23
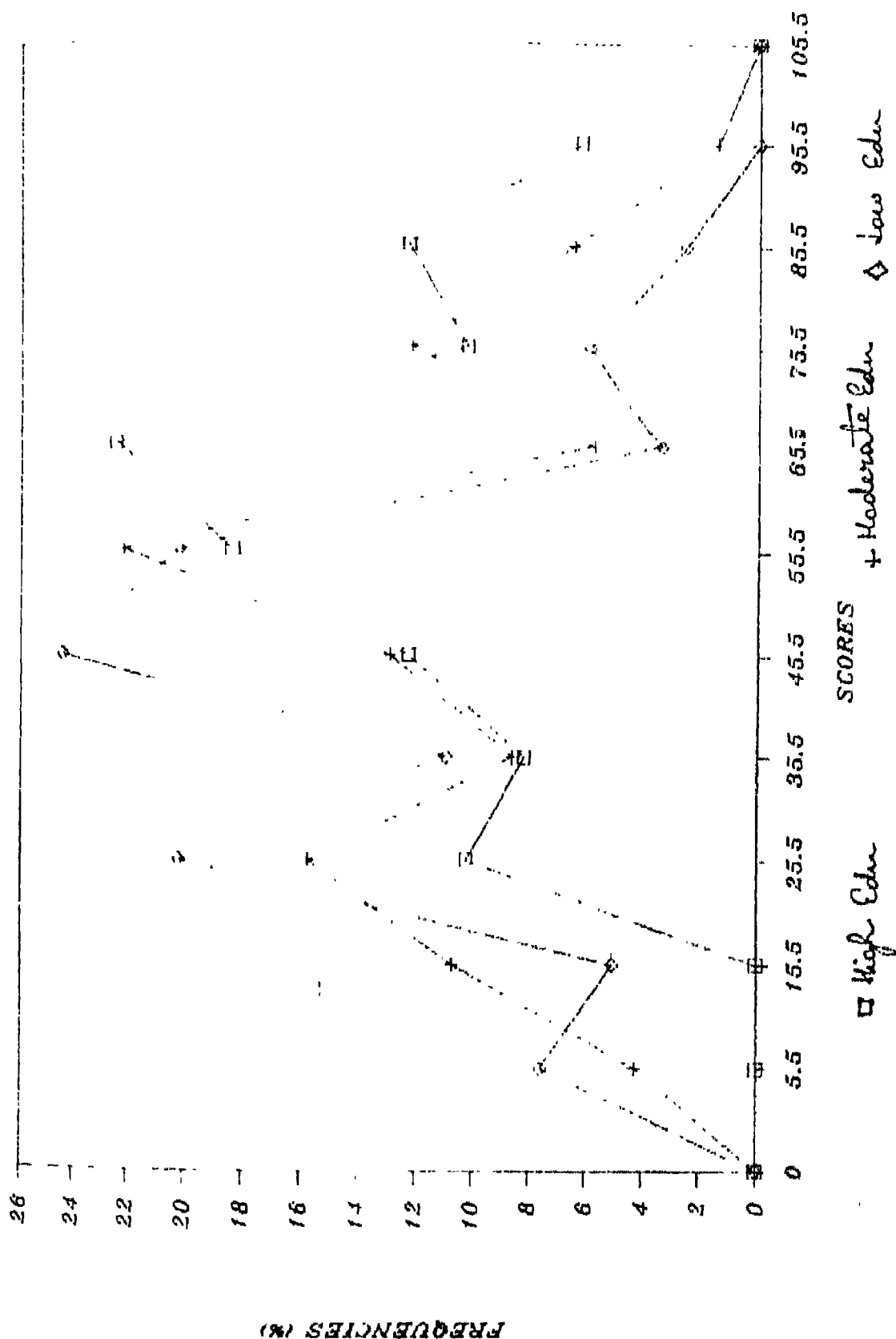
TABLE 4.66 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES

AND FATHER'S EDUCATION FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
High In Education	59.99	60.95	62.88	19.69	-0.146	0.246
Moderate In Education	46.86	48.83	52.78	22.97	-0.258	0.277
Low In Education	41.29	43.08	46.66	19.16	-0.279	0.270

The distribution of Scholastic Readiness scores, Father's Education-wise, are near normally distributed. The distributions are negatively skewed. The distribution of High In Education is leptokurtic and the other two are platykurtic.

TABLE 4.66 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS SCORES

AND FATHER'S EDUCATION FOR THE TOTAL SAMPLE

Group	SEM	.95		.99	
High In Education	2.81	54.74 -	65.50	52.73 -	67.25
Moderate In Education	1.94	43.05 -	50.66	41.85 -	51.86
Low In Education	1.75	37.85 -	44.74	36.76 -	45.83

TABLE 4.66 (c) - Contd.

Group	SEM	.95	.99
High In Education	1.99	15.78 - 23.61	14.54 - 24.85
Moderate In Education	1.38	20.26 - 25.67	19.41 - 26.52
Low In Education	1.24	16.71 - 21.60	15.94 - 22.38

The .95 and .99 confidence limits for the Means and SDs of Scholastic Readiness scores and Father's Education have narrow ranges, implying that the sample statistics are dependable.

SCHOLASTIC READINESS AND OCCUPATION OF MOTHERS

TABLE 4.67 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES ON THE
BASIS OF OCCUPATION OF MOTHERS FOR THE TOTAL
SAMPLE IN PERCENT FREQUENCIES

Scores	HouseWives % F	Clerk % F	Professional % F
1 - 10	5.88	2.94	0
11 - 20	7.98	0	5.55
21 - 30	16.80	23.52	8.33
31 - 40	11.34	5.88	0
41 - 50	20.16	8.88	5.55
51 - 60	20.58	20.58	22.2
61 - 70	6.30	8.82	13.8
71 - 80	5.46	20.58	25.00
81 - 90	4.62	5.88	13.80
91 - 100	0.84	2.94	5.55

Figure 4.67 depicts the distribution of
Scholastic Readiness scores and Occupation of Mothers for the
total sample in the form of frequency polygons. The
frequencies are plotted as percentages.

S.R. AND MOTHERS' OCCUPATION   Fig. 4-67

□ PROFESSIONAL   + CLERKS   ◇ HOUSEWIVES

SCORES

FREQUENCIES (%)
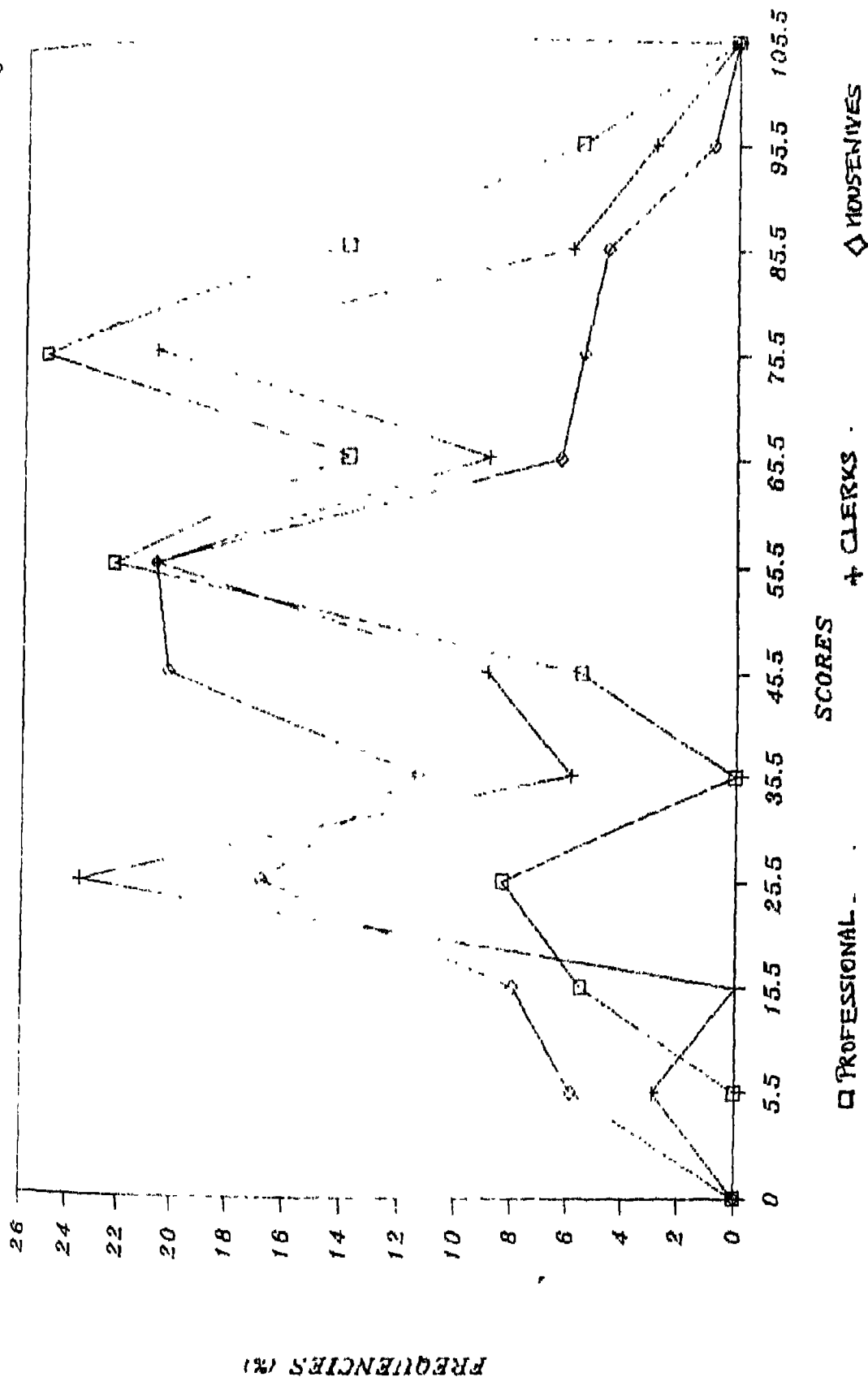
TABLE 4.67 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES

AND OCCUPATION OF MOTHERS FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
Housewives	43.48	44.45	46.40	20.74	-0.141	0.261
Clerk	52.85	54.78	58.65	22.40	-0.258	0.378
Professional	63.00	66.5	73.5	20.99	-0.500	0.205

The distributions of Scholastic Readiness scores and occupation of mothers for the total sample is almost normally distributed. The distributions are negatively skewed. The distributions of the 1st and 3rd group are leptokurtic, while that of the 2nd group is highly platykurtic.

TABLE 4.67 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS SCORES

AND OCCUPATION OF MOTHERS FOR THE TOTAL SAMPLE

Group	SEM	.95		.99	
Housewives	1.34	40.84	- 46.11	40.01	- 46.95
Clerk	3.84	45.32	- 60.38	42.94	- 62.76
Professional	3.49	56.14	- 69.85	53.97	- 72.02

TABLE 4.67 (c) - Contd.

Group	SE OF SD	.95	.99
Housewives	0.95	18.87 - 22.61	18.28 - 23.20
Clerk	2.72	17.05 - 27.74	15.36 - 29.43
Professional	2.48	16.12 - 25.86	14.58 - 27.41

The .95 and .99 confidence limits for the Scholastic Readiness scores and occupation of mothers for the total sample do not exhibit narrow ranges. This is because of the small size of the sample. However, the sample statistics are dependable as true measures.

SCHOLASTIC READINESS AND OCCUPATION OF FATHERS

TABLE 4.68 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES AND
OCCUPATION OF FATHERS FOR THE TOTAL SAMPLE
IN PERCENT FREQUENCIES

Scores	Professional F %	Manager F %	Clerical F %	Business F %	Labourer F %
1 - 10	0	0	7.80	4.40	10.00
11 - 20	0	0	12.76	6.60	0
21 - 30	10.52	14.45	19.85	15.50	10.00
31 - 40	0	7.22	10.63	11.10	15.00
41 - 50	0	24.09	14.18	15.50	30.00
51 - 60	0	16.86	21.98	26.60	35.00
61 - 70	10.52	9.63	5.67	11.10	0
71 - 80	26.31	13.25	6.38	8.80	0
81 - 90	42.10	10.84	0.70	0	0
91 - 100	10.52	3.61	0	0	0

Figure 4.68 depicts the distribution of scholastic Readiness scores and Occupation of Fathers for the total sample in the form of frequency polygons. The frequencies are plotted as percentages.

S.R. AND FATHERS' OCCUPATION

Fig. 4.68
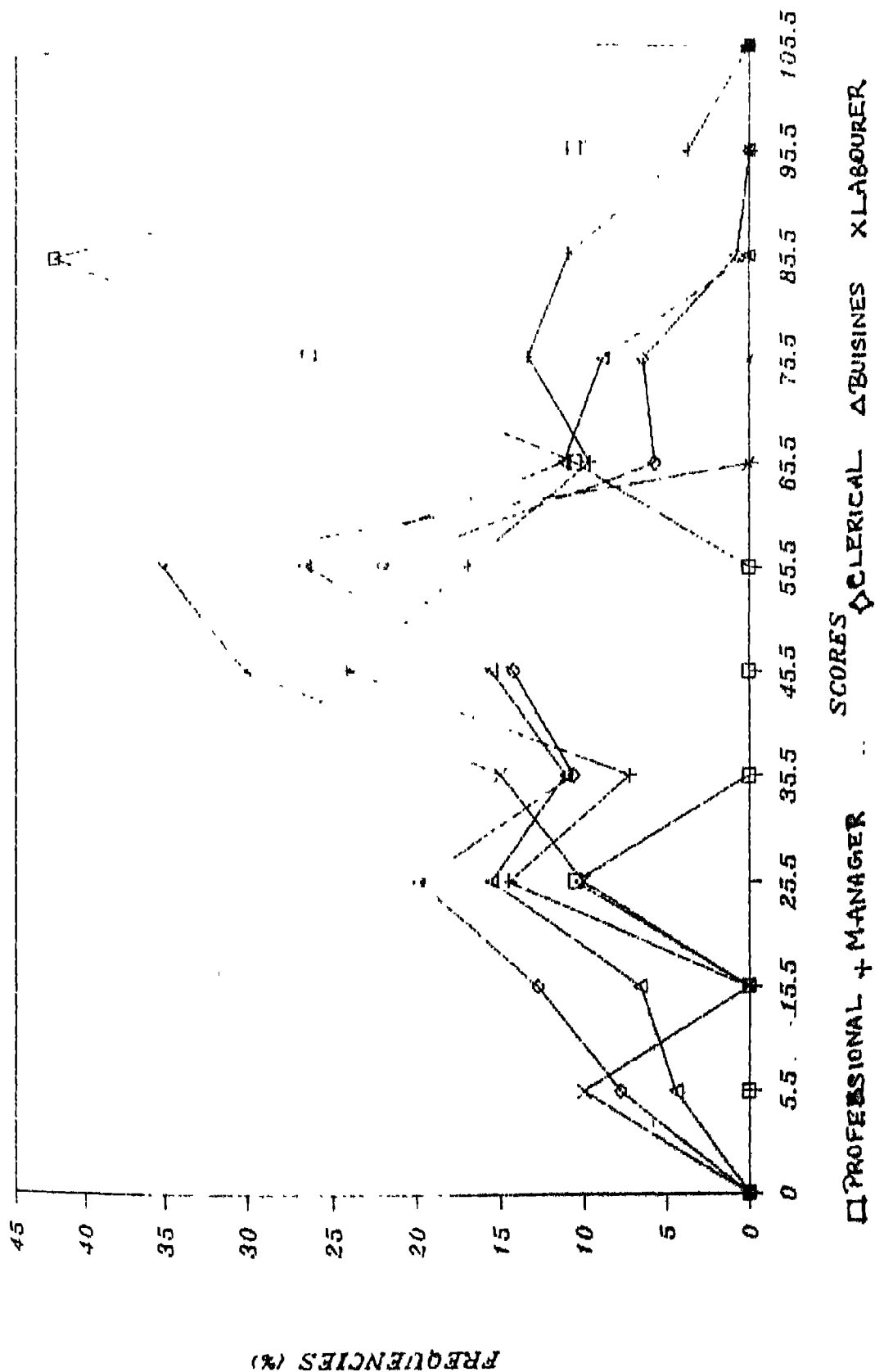
FREQUENCIES (%)

SCORES

□ PROFESSIONAL + MANAGER ◇ CLERICAL △ BUISINES × LABOURER

4-31

TABLE 4.68 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES AND OCCUPATION OF FATHERS FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
Business	45.05	48.35	54.96	18.85	-0.525	0.288
Labourer	41.50	45.50	53.5	15.29	-0.784	0.207
Clerical	39.04	39.50	40.40	20.04	-6.790	0.302
Manager	55.62	53.00	47.75	20.02	0.392	0.268
Professional	75.50	81.12	92.37	18.91	-0.892	0.123

The distributions of scholastics readiness scores and occupation of fathers for the total sample are almost normally distributed. Except the managerial group, the distributions of the other four groups are negatively skewed. Distributions of group 2 and 5 are leptokurtic, and that of groups 1, 3 and 4 are platykurtic.

TABLE 4.68 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS SCORES
AND OCCUPATION OF FATHERS FOR THE TOTAL SAMPLE

Group	SEM	.95		.99	
Business	2.81	39.54 -	50.56	37.80 -	52.30
Labourer	3.42	34.79 -	48.20	32.67 -	50.32
Clerical	1.68	35.73 -	42.35	34.69 -	43.40
Manager	2.19	51.31 -	59.92	49.94 -	61.29
Professional	4.34	66.99 -	84.00	64.30 -	86.69
SE of SD					
Business	1.99	14.94 -	22.76	13.70 -	23.99
Labourer	2.42	10.53 -	20.05	9.03 -	21.56
Clerical	1.19	17.69 -	22.38	16.94 -	23.13
Manager	1.56	16.97 -	23.08	16.00 -	24.05
Professional	3.08	12.87 -	24.95	10.96 ·	26.86

The .95 and .99 confidence limits for the Means
and SDs of Scholastic Readiness scores and occupation of
fathers for the total sample do not have very narrow ranges.
This is so because the size of the sample is small, all the
same, the sample statistics are almost normal.

SCHOLASTIC READINESS AND ECONOMIC STATUS

TABLE 4.69 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES ON THE
BASIS OF ECONOMIC STATUS FOR THE TOTAL
SAMPLE IN PERCENT FREQUENCIES

Scores	Upto Rs.1000 % F	1001 - 3000 % F	3001 - 5000 % F	5001 and above % F
1 - 10	20.00	6.54	0	0
11 - 20	7.50	16.82	0	0
21 - 30	22.50	25.23	11.82	5.88
31 - 40	5.00	6.54	16.12	7.35
41 - 50	17.50	16.82	18.27	19.11
51 - 60	22.50	17.75	24.73	19.11
61 - 70	5.00	6.54	5.37	13.23
71 - 80	5.00	3.73	11.82	17.64
81 - 90	0	0	9.67	13.23
91 - 100	0	0	2.15	4.41

Figure 4.69 depicts the distribution of Scholastic Readiness scores and Economic Status for the total sample in the form of frequency polygons. The frequencies are plotted as percentages.

Aug.4.69

S.R. AND ECONOMIC STATUS

FREQUENCIES (%)

26
24
22
20
18
16
14
12
10
8
6
4
2
0

0   5.5   15.5   25.5   35.5   45.5   55.5   65.5   75.5   85.5   95.5   105.5

□ UPTO Rs1000   + 1001-3000   ◇3001-5000   △ 5001 & ABOVE   SCORES
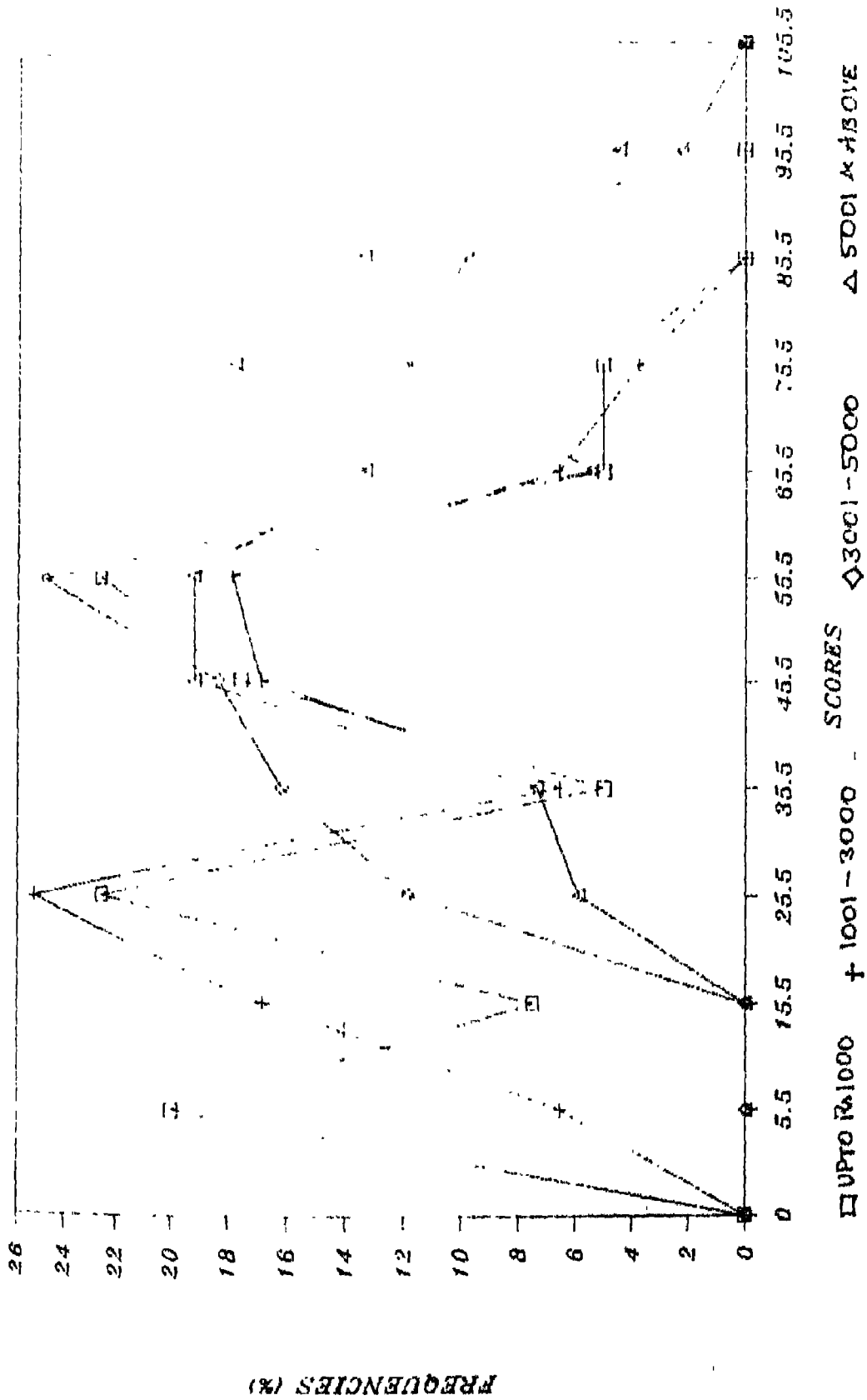
TABLE 4.69 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES ON THE BASIS OF ECONOMIC STATUS FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
1. Upto Rs.1000	35.00	30.50	21.5	21.44	0.629	0.333
2. Rs.1001 to Rs.3000	36.34	32.64	25.24	18.90	0.587	0.321
3. Rs.3001 to Rs.5000	53.56	52.02	48.93	18.96	0.244	0.274
4. Rs.5001 & above	60.94	59.73	57.30	18.58	0.195	0.295

The distribution of Scholastic Readiness scores and Economic Status for the total sample is near normal. The distributions are positively skewed and platykurtic in nature.

TABLE 4.69 (c)

<u>FIDUCIARY LIMITS OF MEAN & SD OF S.R. SCORES ON THE BASIS
OF ECONOMIC STATUS FOR THE TOTAL SAMPLE</u>

Group	SEM	.95	.99
1. Upto Rs.1000	3.39	28.35 – 41.64	26.25 – 43.74
2. Rs.1001 to Rs.3000	1.82	32.75 – 39.92	31.62 – 41.05
3. Rs.3001 to Rs.5001	1.96	49.70 – 57.41	48.49 – 58.63
4. Rs.5001 and above	2.25	56.52 – 65.35	55.12 – 66.75
	SE of SD		
1. Upto Rs.1000	2.40	16.72 – 26.15	15.23 – 27.65
2. Rs.1001 to Rs.3000	1.29	16.35 – 21.44	15.55 – 22.24
3. Rs.3001 to Rs.5001	1.39	16.22 – 21.70	15.36 – 22.56
4. Rs.5001 and above	1.60	15.44 – 21.72	14.45 – 22.71

The .95 and .99 fiduciary intervals of Means and SDs of Scholastic Readiness scores and Economic Status for the total sample have narrow ranges except group 1 which has slightly wide range. This could be because the sample is very small.

SCHOLASTIC READINESS AND NUMBER OF SIBLINGS

TABLE 4.70 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES
AND NUMBER OF SIBLINGS FOR THE TOTAL
SAMPLE IN PERCENT FREQUENCIES

Scores	Only Child	One Siblings	Two Siblings	Three or more
1 - 10	0	0.97	7.04	14.51
11 - 20	1.38	3.88	12.60	11.29
21 - 30	13.88	21.35	13.49	12.90
31 - 40	13.88	1.94	11.26	14.51
41 - 50	11.11	10.44	19.71	19.35
51 - 60	19.44	20.38	21.12	22.58
61 - 70	8.34	11.65	4.22	3.22
71 - 80	15.27	12.62	5.63	1.60
81 - 90	12.50	6.79	2.81	0
91 - 100	4.16	1.94	0	0

Figure 4.70 depicts the distribution of
Scholastic Readiness scores and Number of siblings for the
total sample in the form of frequency polygons. The
frequencies are plotted as percentages.

S.P. AND NUMBER OF SIBLINGS

Fig 4.71c
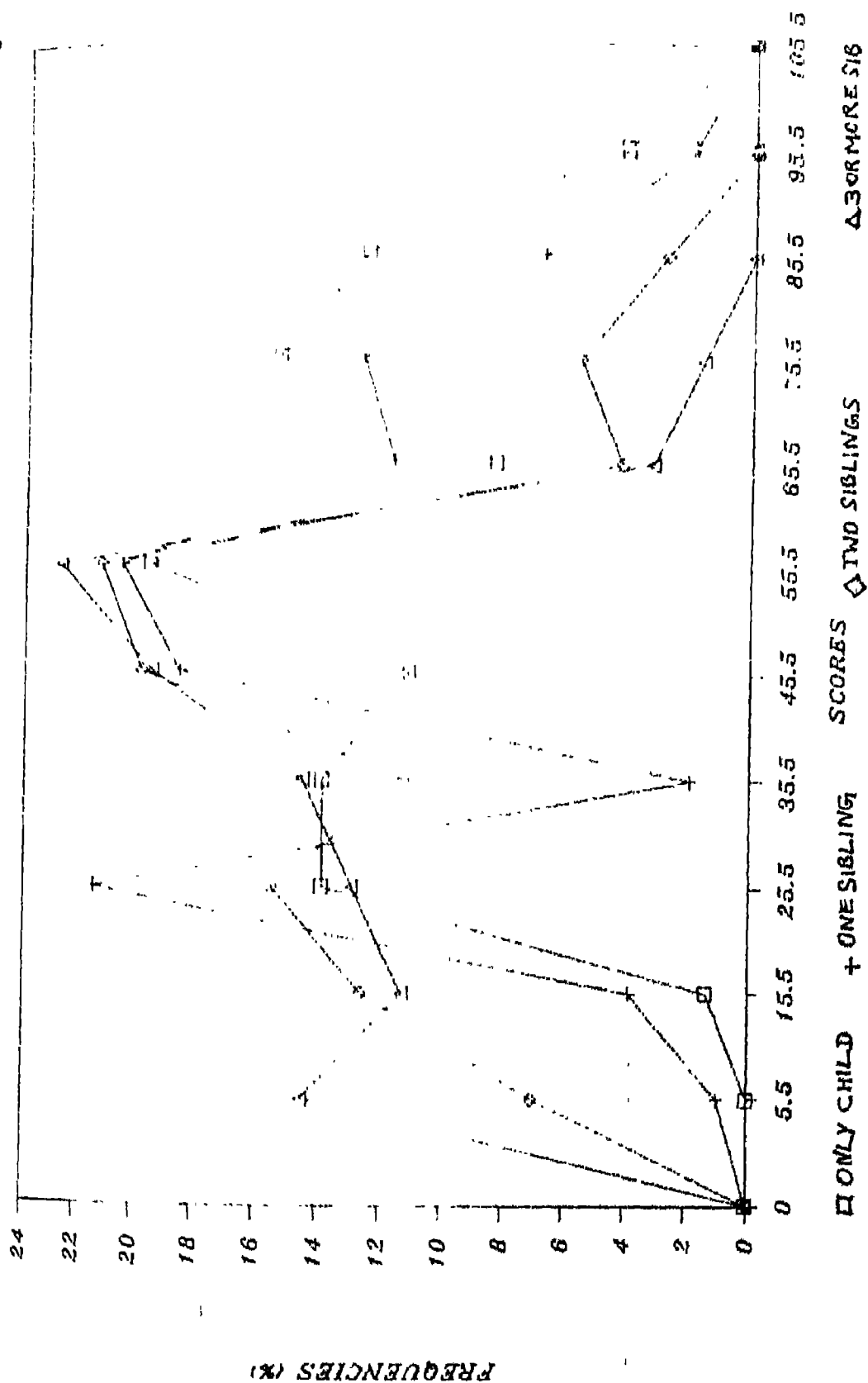
TABLE 4.70 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES ON THE

BASIS OF NUMBER OF SIBLINGS FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
Only Child	56.19	55.50	54.11	21.49	9.690	0.317
One Sibling	51.32	52.16	53.84	21.01	-0.120	0.330
Two Siblings	40.42	42.28	45.99	20.20	-0.275	0.284
Three or More	35.66	38.27	43.51	18.79	-0.417	0.312

The distribution of Scholastic Readiness scores and Number of Siblings for the total sample is near normal. Excepting the group of only child, the distributions of the remaining three groups are negatively skewed. The distributions are platykurtic in nature.

TABLE 4.70 (c)

FIDUCIARY LIMITS OF MEAN & SD OF SCHOLASTIC READINESS SCORES

ON THE BASIS OF NUMBER OF SIBLINGS FOR THE TOTAL SAMPLE

Group	SEM	.95		.99	
Only Child	2.53	51.22	- 61.15	49.65	- 62.73
One Sibling	2.07	47.26	- 55.38	45.98	- 56.66
Two Siblings	2.39	35.73	- 45.12	34.24	- 46.61
Three & More	2.38	30.98	- 40.33	29.50	- 41.81

TABLE 4.70 (c) - Contd.

Group	SE OF SD	.95		.99	
Only Child	1.79	17.96 - 25.01		16.85 - 26.13	
One Sibling	1.47	18.13 - 23.90		17.22 - 24.81	
Two Siblings	1.70	16.86 - 23.53		15.80 - 24.59	
Three or More	1.69	15.47 - 22.11		14.42 - 23.16	

The .95 and .99 confidence limits for the means and SDs of Scholastic Readiness scores and Number of Siblings do not have narrow ranges. This may be due to the small size of the sample. All the same, the sample statistics are dependable.

SCHOLASTIC READINESS AND RESIDENTIAL AREA

TABLE 4.71 (a)

DISTRIBUTION OF SCHOLASTIC READINESS SCORES ON THE
BASIS OF RESIDENTIAL AREA FOR THE TOTAL
SAMPLE IN PERCENT FREQUENCIES

SCORES	SION % F	KOLIWADA % F	DHARAVI % F	MATUNGA % F
1 - 10	4	3.50	13.80	0.79
11 - 20	8	3.50	16.60	3.17
21 - 30	0	7.05	36.10	15.07
31 - 40	8	4.70	15.20	9.52
41 - 50	20	24.70	6.94	17.40
51 - 60	24	29.41	6.94	22.20
61 - 70	8	8.23	2.70	9.52
71 - 80	16	12.94	1.38	10.31
81 - 90	8	5.88	0	8.73
91 - 100	4	0	0	3.17

Figure 4.71 depicts the distribution of
Scholastic Readiness scores and Residential Area for the
total sample in the form of frequency polygons. The
frequencies are plotted as percentages.

S.R. AND RESIDENTIAL AREA

Fig. 4-71

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FREQUENCIES (%)

SCORES

□ SION   + KOLIVADA   ◇ DHARAVI   △ MATUNGA
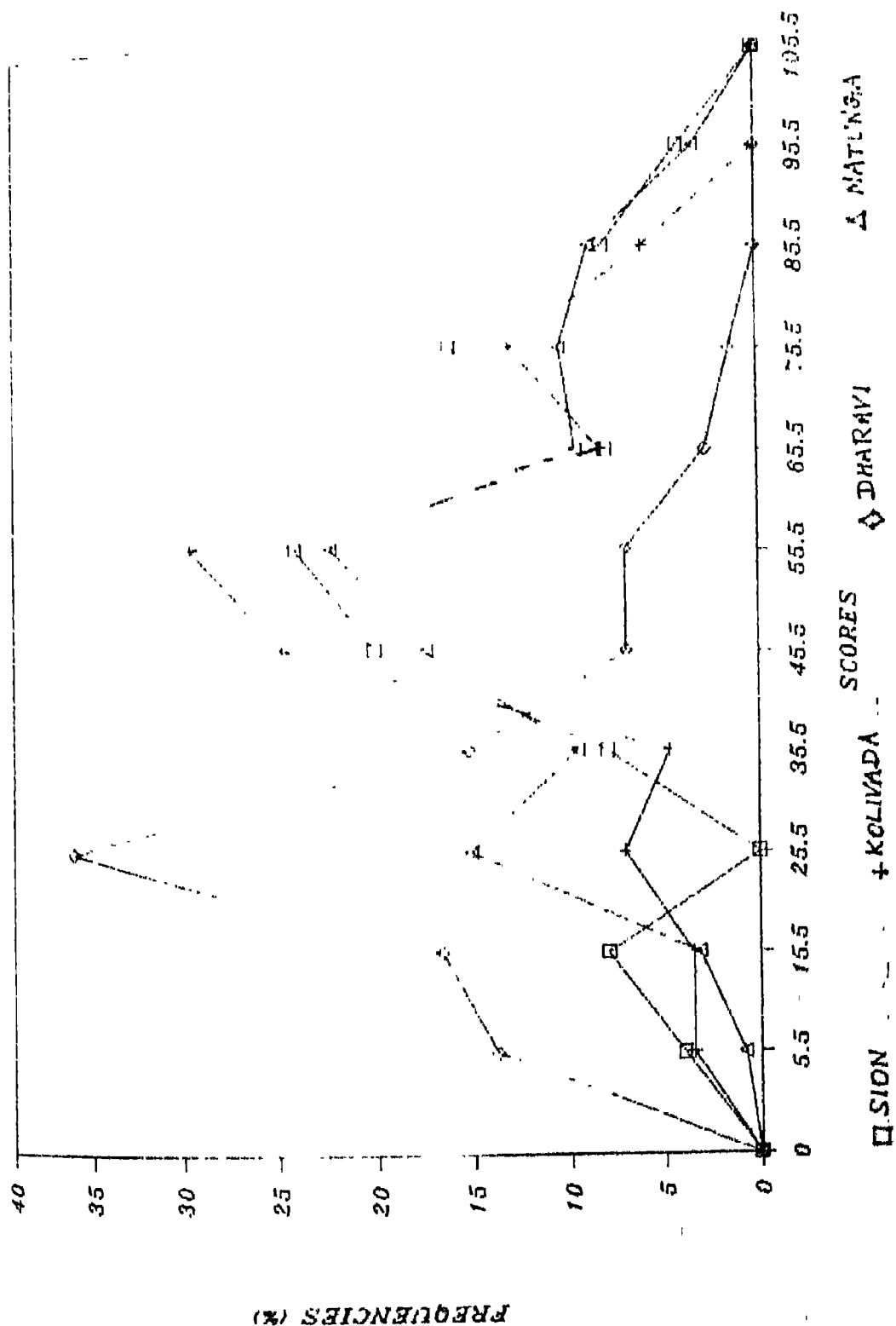
TABLE 4.71 (b)

RELEVANT STATISTICS OF SCHOLASTIC READINESS SCORES ON THE BASIS OF RESIDENTIAL AREA FOR THE TOTAL SAMPLE

Group	Mean	Median	Mode	SD	SK	Kur
Sion	54.70	54.66	54.60	22.07	4.52	0.225
Koliwada	51.97	52.70	54.15	18.76	-0.116	0.189
Dharavi	27.86	25.88	21.93	15.85	0.373	0.211
Matunga	52.56	52.28	51.73	20.81	4.00	0.264

The distributions of Scholastic Readiness scores Residential-wise are almost normal, except Dharavi area, in which there is a slight variation. Except the Koliwada area, the other three distributions are positively skewed. Except the 4th group which is slightly mesokurtic, the other 3 groups are leptokurtic.

PARENTAL INVOLVEMENT

TABLE 4.72(a)

DISTRIBUTION OF PARENTAL INVOLVEMENT SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
61 - 75	14	11.60
76 - 90	21	46.30
91 - 105	104	77.60
106 - 120	108	76.30
121 - 135	17	45.60
136 - 150	12	9.60
151 - 165	0	
166 - 180	0	
TOTAL	276	

Figure 4.72 gives the original and smoothed frequency polygons of P.I. scores for the total sample.

Fig. 4.72

P.I. OF THE TOTAL SAMPLE

FREQUENCIES

SCORES

□ ORIGINAL + S.M.F.
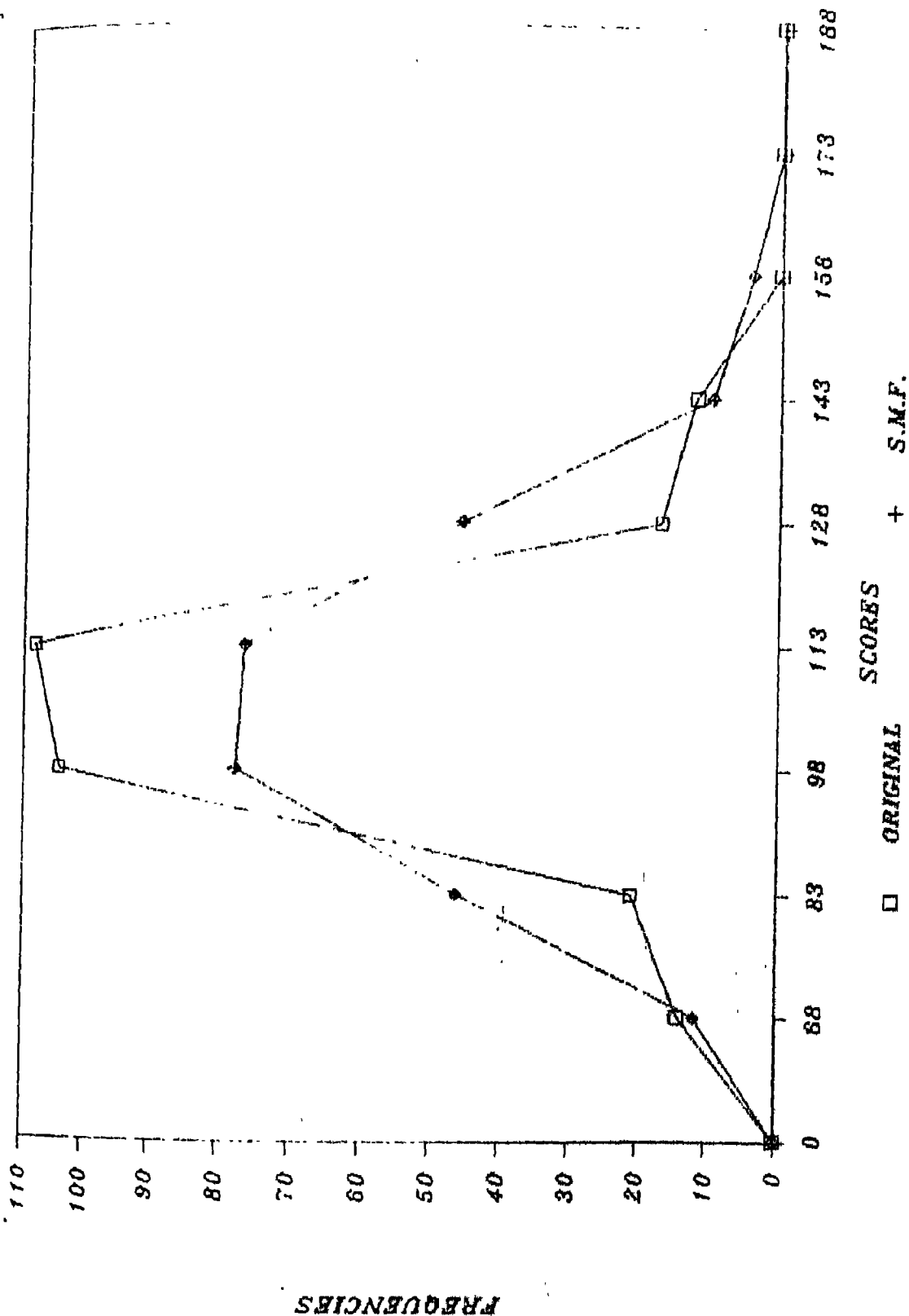
TABLE 4.72(b)

RELEVANT STATISTICS OF P.I. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	105.01	105.36	106.05	15.67	-0.067	0.268

The distribution of P.I. scores for the total sample is near normal. The distribution is negatively skewed and is platykurtic in nature.

TABLE 4.72(c)

FIDUCIARY LIMITS OF MEAN & SD OF P.I.

SCORES FOR THE TOTAL SAMPLE

Statistic	SE	.95	.99
Mean	0.94	103.16 - 106.86	107.58 - 101.44
SD	0.67	14.35 - 16.97	13.93 - 17.38

The Fiduciary limits of the Mean and SD for the P.I. scores of the total sample has fairly narrow ranges. This implies that the sample statistics are dependable in terms of the degree to which they represent the population parameters.

TABLE 4.73 (a)

DISTRIBUTION OF MOTHERS INVOLVEMENT

SCORES

Scores	F	SMF
61 - 75	7	5.00
76 - 90	8	19.60
91 - 105	44	34.60
106 - 120	52	35.00
121 - 135	9	22.30
136 - 150	6	5.00
151 - 165	0	
166 - 180	0	
TOTAL	126	

Figure 4.73 gives the original and smoothed frequency polygons of Mothers Involvement scores.

P.I. OF MOTHERS

Fig 4.73

450
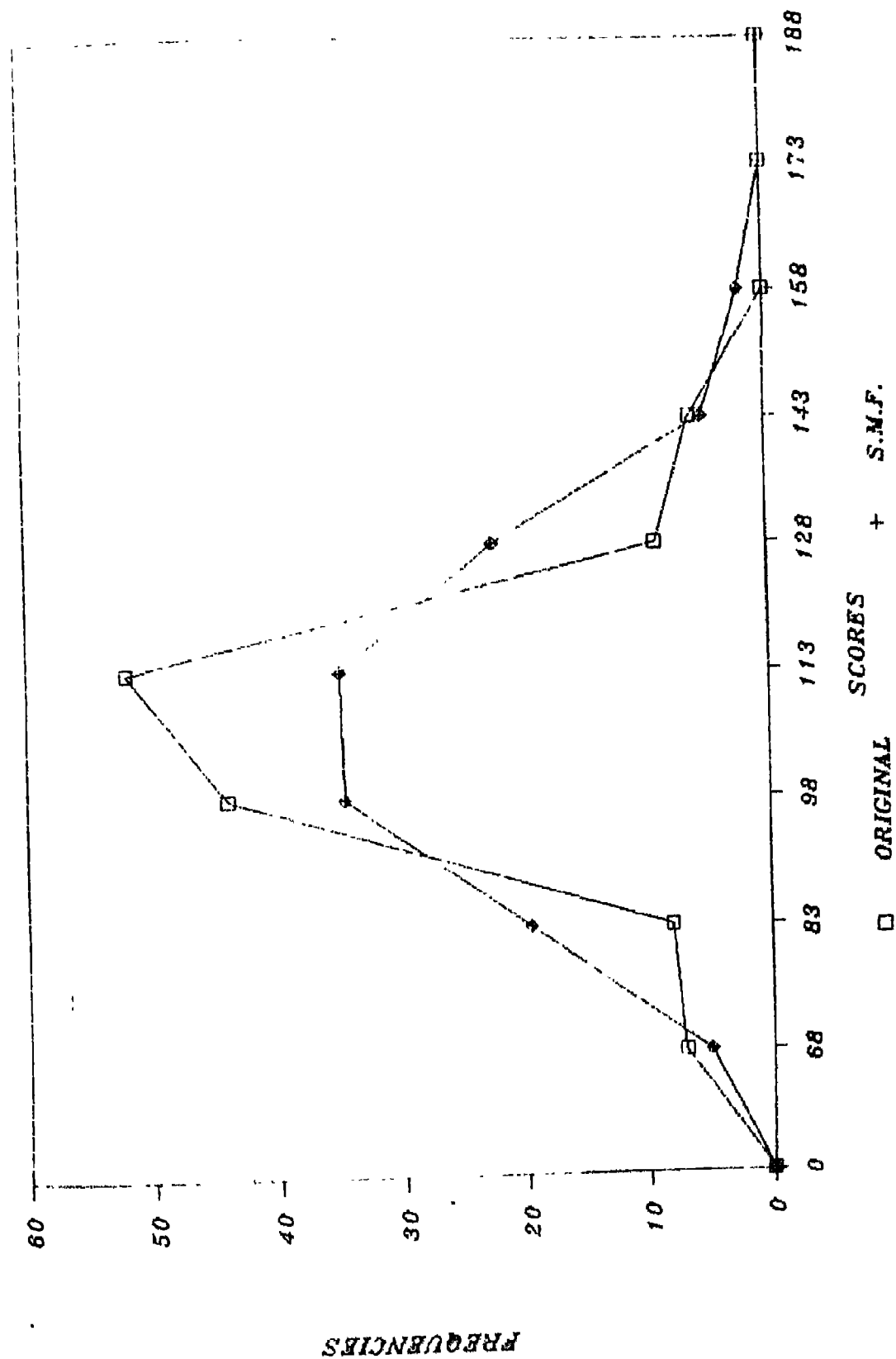
TABLE 4.73 (b)

RELEVANT STATISTICS OF MOTHERS

INVOLVEMENT

N	Mean	Median	Mode	SD	SK	Kur
126	105.86	106.65	108.25	16.00	-0.149	0.255

The distribution of P.I. scores among Mothers is near normal. The skewness of the distribution is negative and is slightly leptokurtic.

TABLE 4.73 (c)

FIDUCIARY LIMITS OF MEAN & SD

OF MOTHERS INVOLVEMENT

Statistic	SE	.95	.99
Mean	1.43	103.06 - 108.65	102.18 - 109.54
SD	1.01	14.02 - 17.99	13.39 - 18.62

The Fiduciary limits of Mean & SD for the P.I. scores of Mothers have fairly narrow ranges. This indicates that the population parameters are fairly dependable as true measures.

TABLE 4.74 (a)

DISTRIBUTION OF FATHERS INVOLVEMENT

SCORES

Scores	F	SMF
61 - 75	4	4.30
76 - 90	9	11.67
91 - 105	22	17.33
106 - 120	21	15.00
121 - 135	2	8.00
136 - 150	1	1.00
151 - 165	0	
166 - 180	0	
TOTAL	59	

Figure 4.74 gives the original and smoothed frequency polygons of Fathers Involvement scores.

P.I. OF FATHERS

Fig 4·74

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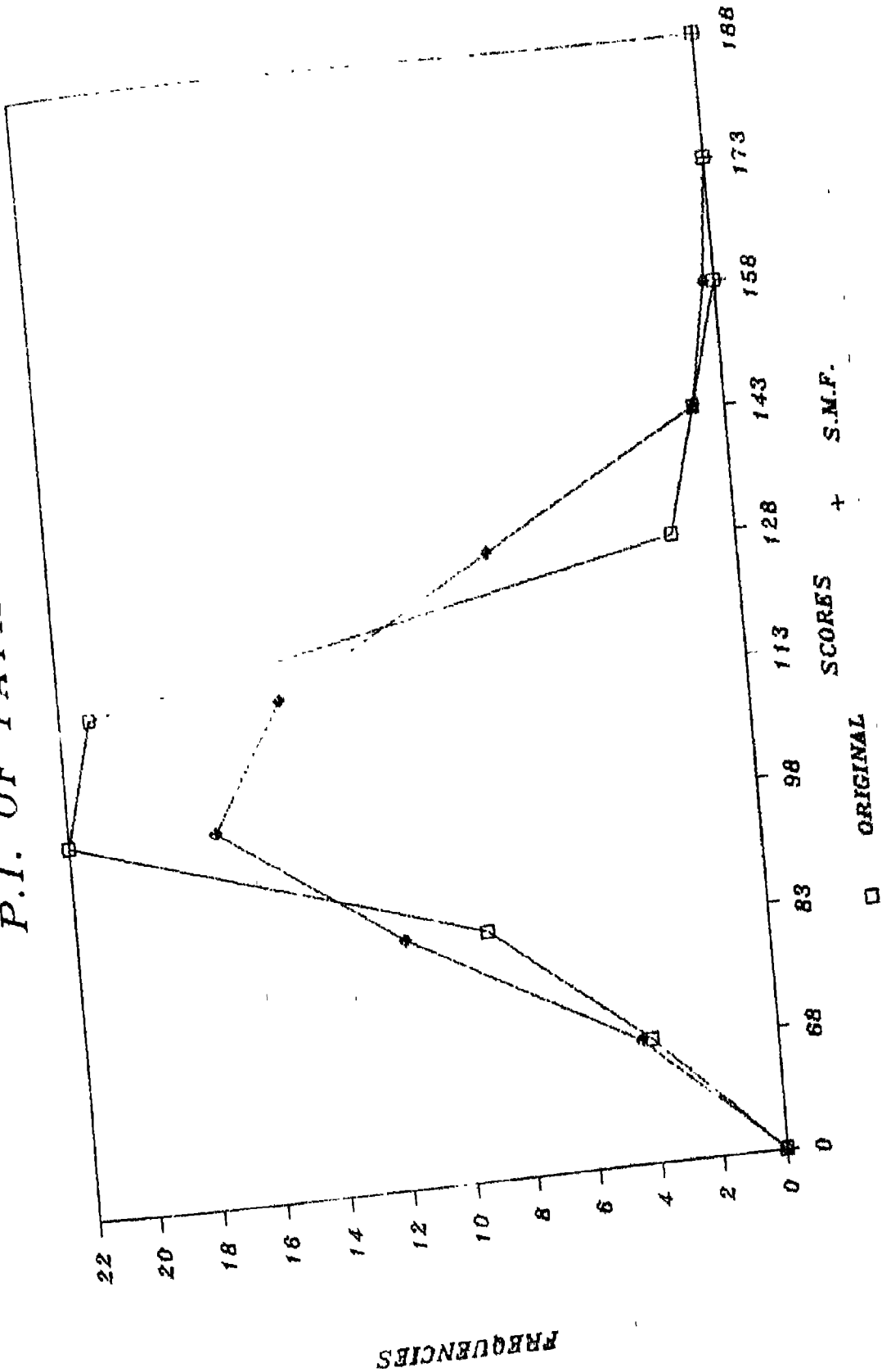
TABLE 4.74 (b)

RELEVANT STATISTICS OF FATHERS
INVOLVEMENT SCORES

N	Mean	Median	Mode	SD	SK	Kur
59	100.80	101.75	103.66	15.25	-0.188	0.257

The distribution of P.I. scores for Fathers is almost normal. The curve is negatively skewed and is leptokurtic in nature.

TABLE 4.74(c)

FIDUCIARY LIMITS OF MEAN & SD OF MOTHERS
INVOLVEMENT SCORES

Statistic	S.E.	.95	.99
Mean	1.98	96.91 - 104.69	95.68 - 105.92
SD	1.41	12.48 - 18.01	11.61 - 18.88

The .95 and .99 fiduciary intervals of the mean & SD of Fathers Involvement scores is fairly narrow signifying that the estimated statistics are dependable as true measures.

TABLE 4.75 (a)

DISTRIBUTION OF PARENTAL INVOLVEMENT
SCORES FOR "BOTH PARENTS"

Scores	F	SMF
61 - 75	3	2.30
76 - 90	4	15.00
91 - 105	38	25.60
106 - 120	35	26.30
121 - 135	6	15.30
136 - 150	5	3.60
151 - 165	0	
166 - 180	0	
TOTAL	91	

Figure 4.75 gives the original and smoothed
frequency polygons of P.I. scores of "Both Parents".

Fig 4.15

P.I. OF BOTH PARENTS

□ ORIGINAL   + S.M.F.

SCORES

FREQUENCIES
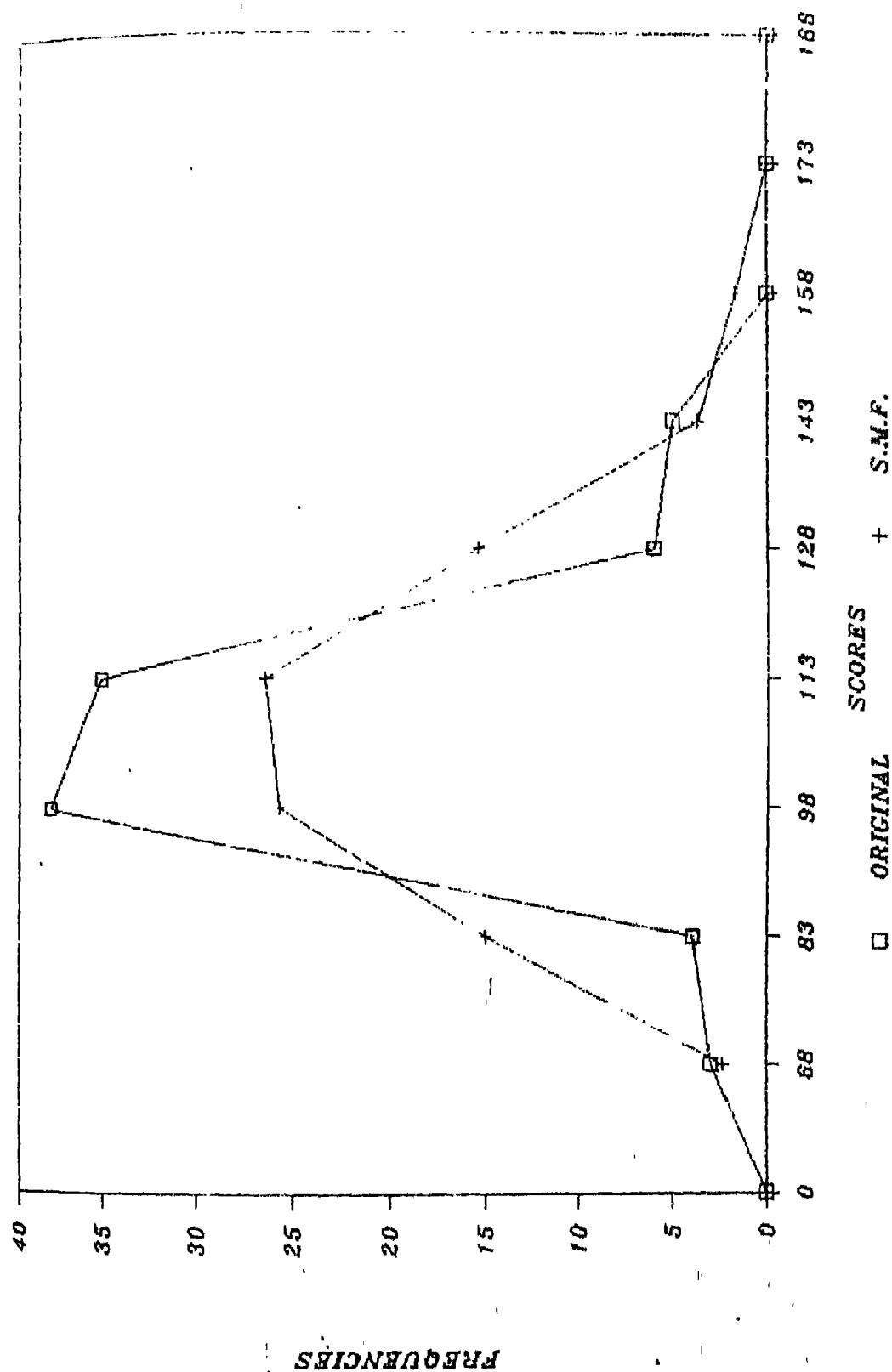
TABLE 4.75 (b)

RELEVANT STATISTICS OF P.I. SCORES

FOR BOTH PARENTS

N	Mean	Median	Mode	SD	SK	Kur
91	106.57	105.71	104.00	14.94	0.172	0.276

The distribution of P.I. scores for both parents is near normal. The skewness of the distribution is positive and the curve is platykurtic.

TABLE 4.75 (c)

FIDUCIARY LIMITS OF MEAN & SD OF P.I. SCORES

FOR BOTH PARENTS

Statistic	S.E.	.95	.99
Mean	1.57	103.50 - 109.64	102.53 - 110.61
SD	1.11	12.76 - 17.12	12.07 - 17.81

The Fiduciary limits of Mean & SD of the P.I. scores for Both Parents have fairly narrow ranges. This indicates that the dependability of the sample statistics as true measures.

TABLE 4.76 (a)

DISTRIBUTION OF ATTITUDE TO CHILD REARING

SCORES FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 5	0	
6 - 10	0	8.30
11 - 15	25	84.00
16 - 20	227	92.00
21 - 25	24	83.60
26 - 30	0	8.00
TOTAL	276	

Figure 4.76 gives the original and smoothed frequency polygons of A.C.R. scores for the total sample.

A.C.R. OF THE TOTAL SAMPLE

Fig. 4.16

FREQUENCIES

SCORES

□ ORIGINAL   + S.M.F.
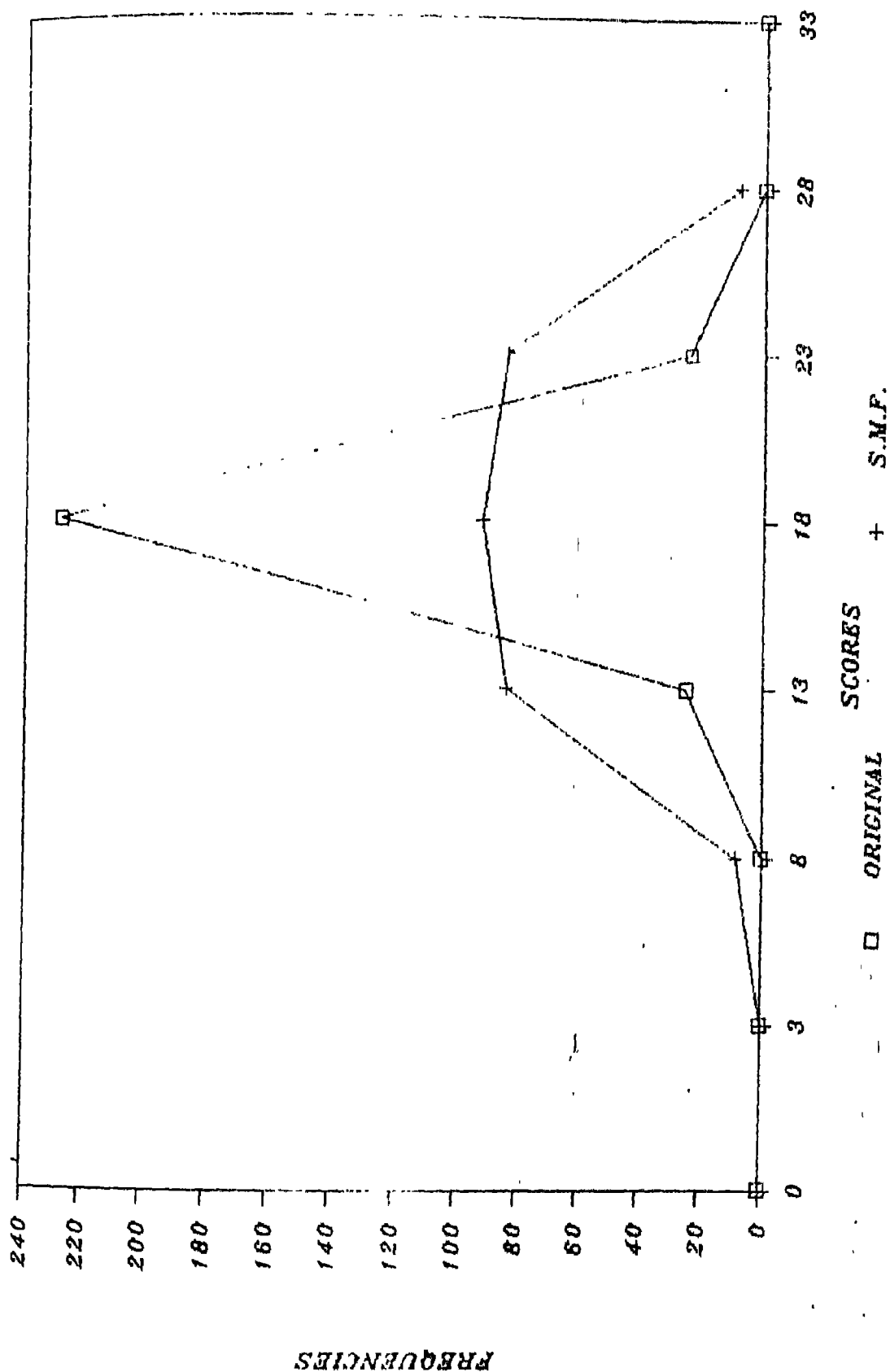
TABLE 4.76 (b)

RELEVANT STATISTICS OF A.C.R. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	17.98	17.99	18.00	2.11	-0.014	0.313

The scores of A.C.R. for total sample is distributed normally. The skewness of the distribution is negative & is platykurtic in nature.

TABLE 4.76 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.C.R.

SCORES FOR THE TOTAL SAMPLE

Statistic	S.E.	.95	.99
Mean	0.13	17.73 - 18.23	17.65 - 18.31
SD	9.00	1.93 - 2.28	1.87 - 2.34

The fiduciary limits of Mean & SD of A.C.R. scores for the total sample have very narrow ranges. This supports the normality of distribution and also the high degree of significance of the sample statistics.

TABLE 4.77 (a)

DISTRIBUTION OF ACTUAL HANDLING SCORES

FOR THE TOTAL SAMPLE

Scores	F.	SMF
1 - 5	0	1.60
6 - 10	5	10.30
11 - 15	26	82.60
16 - 20	217	90.30
21 - 25	28	81.60
26 - 30	0	9.30
Total	276	

Figure 4.77 gives the original and smoothed frequency polygons of A.H scores for the total sample.

A.H. OF THE TOTAL SAMPLE

Fig.4.17

FREQUENCIES

SCORES

□ ORIGINAL + S.M.F.
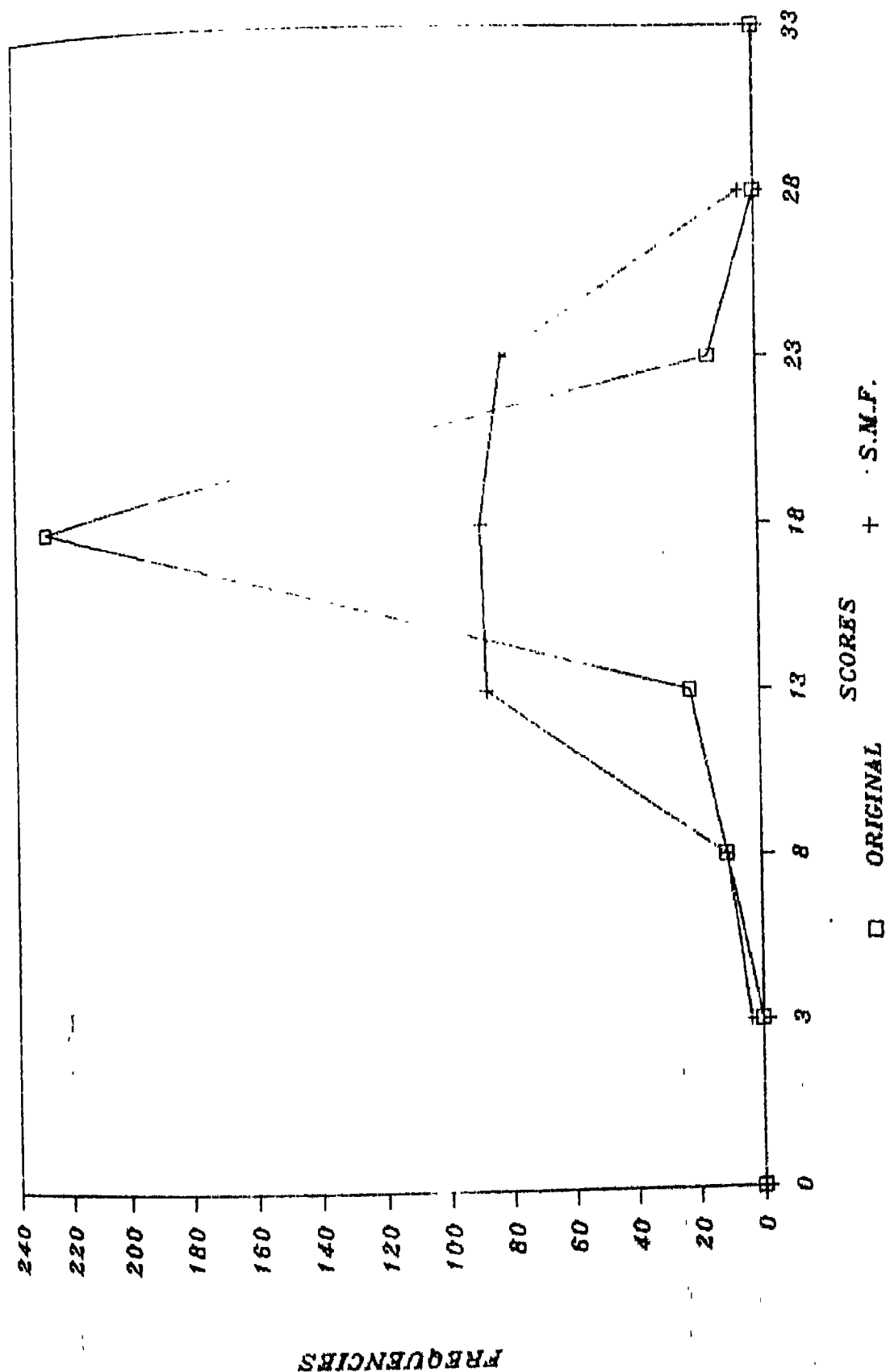
TABLE 4.77 (b)

RELEVANT STATISTICS OF A.H. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	17.47	17.80	18.46	2.66	-0.372	0.254

The A.H. scores for total sample is normally distributed. The distribution is negatively skewed & is platykurtic in nature.

TABLE 4.77 (c)

FIDUCIARY LIMITS OF MEAN & SD OF A.H.

SCORES FOR THE TOTAL SAMPLE

Statistic	S.E.	.95	.99
Mean	0.16	17.16 – 17.79	17.06 – 17.89
SD	0.11	2.43 – 2.88	2.36 – 2.95

The Fiduciary limits of Mean & SD of A.H. scores for the total sample have very narrow ranges thus supporting the normality of the distribution and also indicating the high degree of significance of the sample statistics.

TABLE 4.78 (a)

DISTRIBUTION OF INTER PERSONAL RELATIONS SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 5	0	0
6 - 10	0	15
11 - 15	45	86
16 - 20	213	92
21 - 25	18	77
26 - 30	0	6
TOTAL	276	

Figure 4.78 gives the original and smoothed frequency polygons of I.P.R. scores for the total sample.

Fig 4.78

I.P.R. OF THE TOTAL SAMPLE

□ ORIGINAL   + S.M.F.

SCORES

FREQUENCIES

4-65
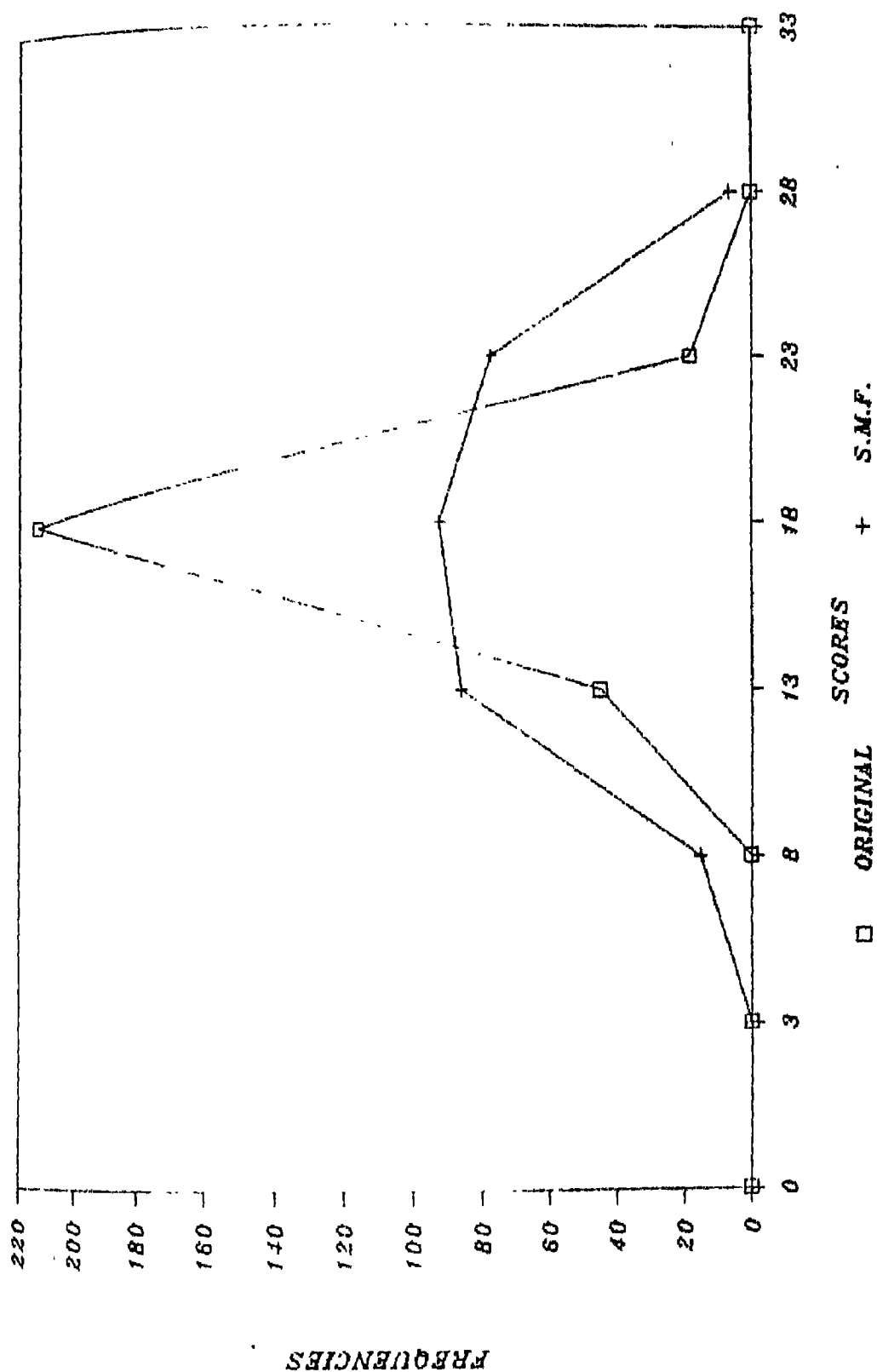
TABLE 4.78 (b)

RELEVANT STATISTICS OF I.P.R. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	17.51	17.68	18.03	2.34	-0.218	0.241

The distribution of I.P.R. scores for the total sample is near normal. The distribution is negatively skewed & is leptokurtic in nature.

TABLE 4.78 (b)

FIDUCIARY LIMITS OF MEAN & SD OF I.P.R. SCORES

FOR THE TOTAL SAMPLE.

Statistic	S.E.	.95	.99
Mean	0.14	17.24 - 17.79	17.15 - 17.87
SD	9.99	2.14 - 2.53	2.08 - 2.60

The Fiduciary limits of Mean & SD of the I.P.R. scores for the total sample have narrow ranges. This implies that the sample statistics are dependable in terms of the degree to which they represent the population parameters.

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TABLE 4.79 (a)

DISTRIBUTION OF EXPECTATIONS OF PARENTS SCORES

FOR THE TOTAL SAMPLE

Scores	F	SMF
1 - 5	0	
6 - 10	0	11.30
11 - 15	34	83.00
16 - 20	215	92.00
21 - 25	27	80.60
26 - 30	0	9.00
Total	276	

Figure 4.79 gives the original and smoothed frequency polygons of E.P. scores for the total sample.

E.P. OF THE TOTAL SAMPLE

Fig. 4.79

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□   ORIGINAL   +   S.M.F.

SCORES

FREQUENCIES
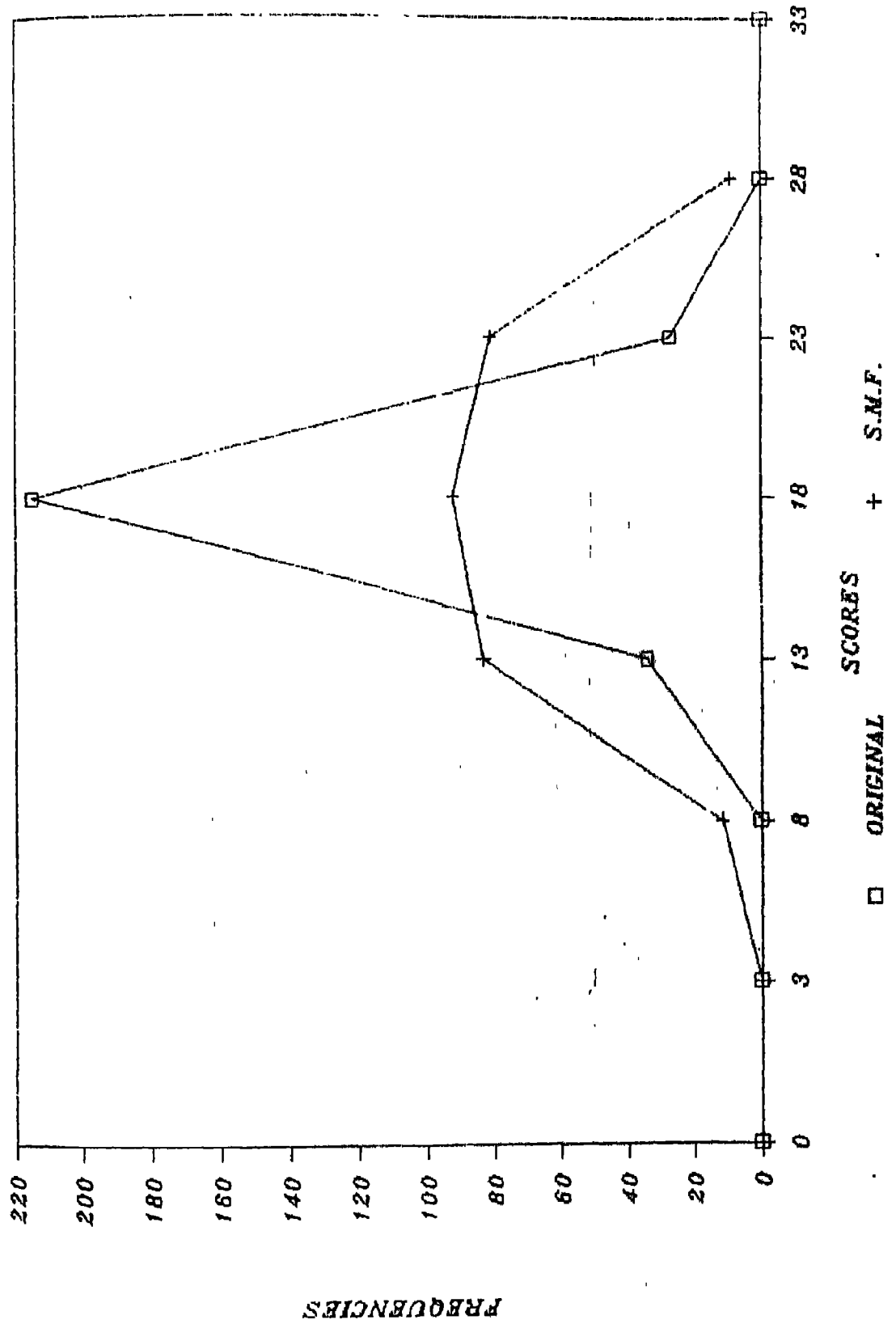
TABLE 4.79 (b)

RELEVANT STATISTICS OF E.P. SCORES
FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	17.87	17.92	18.01	2.35	−0.063	0.271

The E.P. scores for total sample is normally distributed. The curve is negatively skewed & is platykurtic in nature.

TABLE 4.79 (c)

FIDUCIARY LIMITS OF MEAN & SD OF E.P. SCORES
FOR THE TOTAL SAMPLE

Statistic	S.E.	.95	.99
Mean	0.14	17.60 - 18.15	17.51 - 18.24
SD	0.10	2.15 - 2.54	2.09 - 2.61

The Fiduciary limits of Mean & SD of E.P. scores for the total sample have narrow ranges. This indicates the normality of the distribution and supports the high degree of significance of the sample statistics.

TABLE 4.80 (a)

DISTRIBUTION OF FACILITIES PROVIDED TO THE CHILD

SCORES FOR THE TOTAL SAMPLE

Scores	F.	SMF
1 - 5	0	
6 - 10	11	11.00
11 - 15	22	87.00
16 - 20	228	88.30
21 - 25	15	81.00
26 - 30	0	3.00
Total	276	

Figure 4.80 gives the original and smoothed frequency polygons of F.P. to the child for the total sample.

F.P. OF THE TOTAL SAMPLE

Fig.4.80

4-71

□ ORIGINAL   + S.M.F.
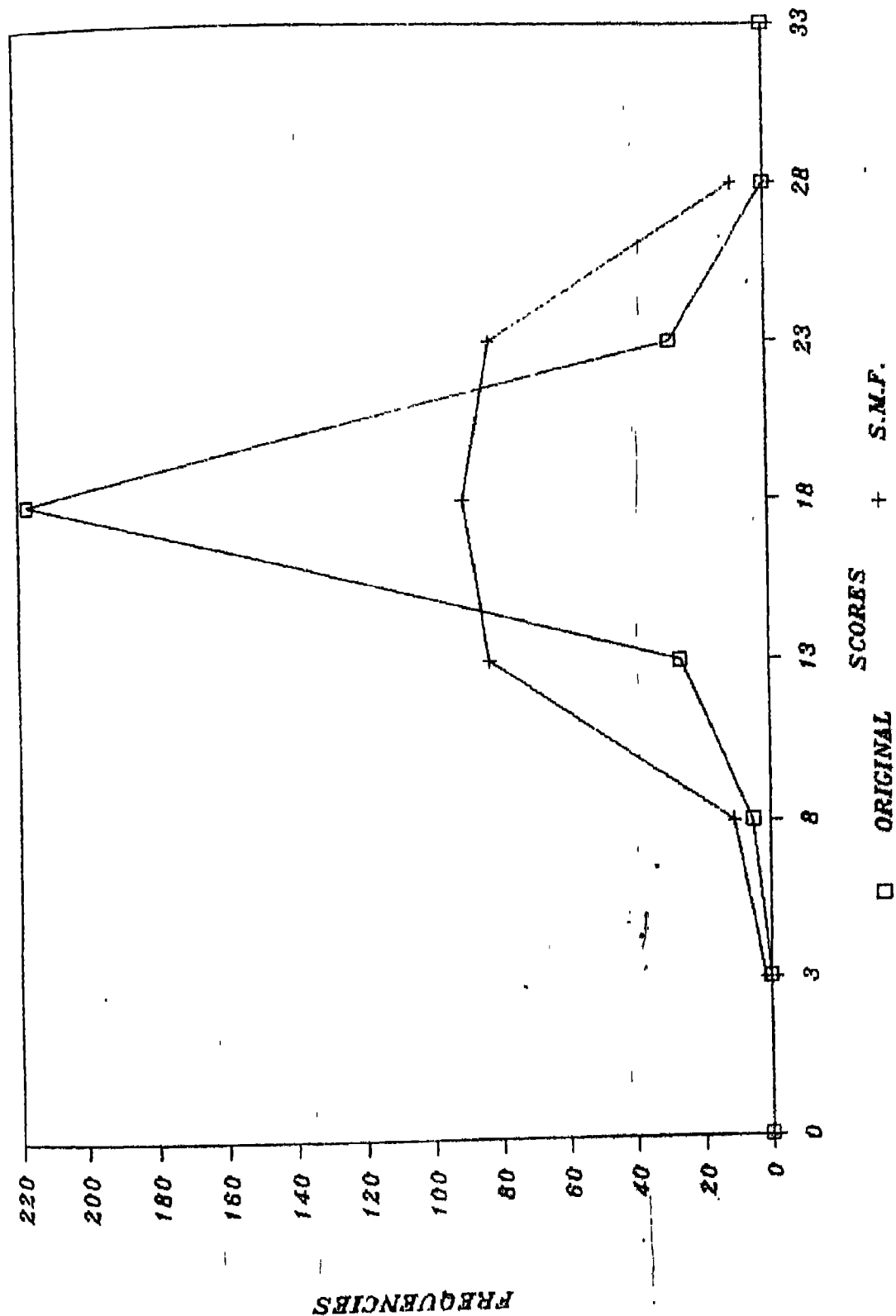
TABLE 4.80 (b)

RELEVANT STATISTICS OF F.P. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	17.86	17.97	18.19	2.58	-0.128	0.278

The distribution of F.P. scores for the total sample is normal. The curve is negatively skewed & is platykurtic in nature.

TABLE 4.80 (c)

FIDUCIARY LIMITS OF MEAN & SD OF F.P. SCORES

FOR THE TOTAL SAMPLE

Statistic	S.E.	.95	.99
Mean	0.16	17.55 - 18.16	17.45 - 18.26
SD	0.11	2.37 - 2.80	2.30 - 2.8⁷

The fiduciary limits of Mean & SD for F.P. scores for the total sample are fairly narrow in the ranges. This signifies that the estimated statistics are dependable as true measures.

TABLE 4.81 (a)

DISTRIBUTION OF "PREPARATION OF THE CHILD"

SCORES FOR THE TOTAL SAMPLE

Scores	F.	SMF
1 - 5	0	
6 - 10	3	29.66
11 - 15	86	86.60
16 - 20	171	91.00
21 - 25	16	62.30
26 - 30	0	5.30
Total	276	

Figure 4.81 gives the original and smoothed frequency polygons of P.C. scores for the total sample.

P.C. OF THE TOTAL SAMPLE

Fig. 4.81

FREQUENCIES

ORIGINAL SCORES + S.M.F.

□ ORIGINAL   + S.M.F.
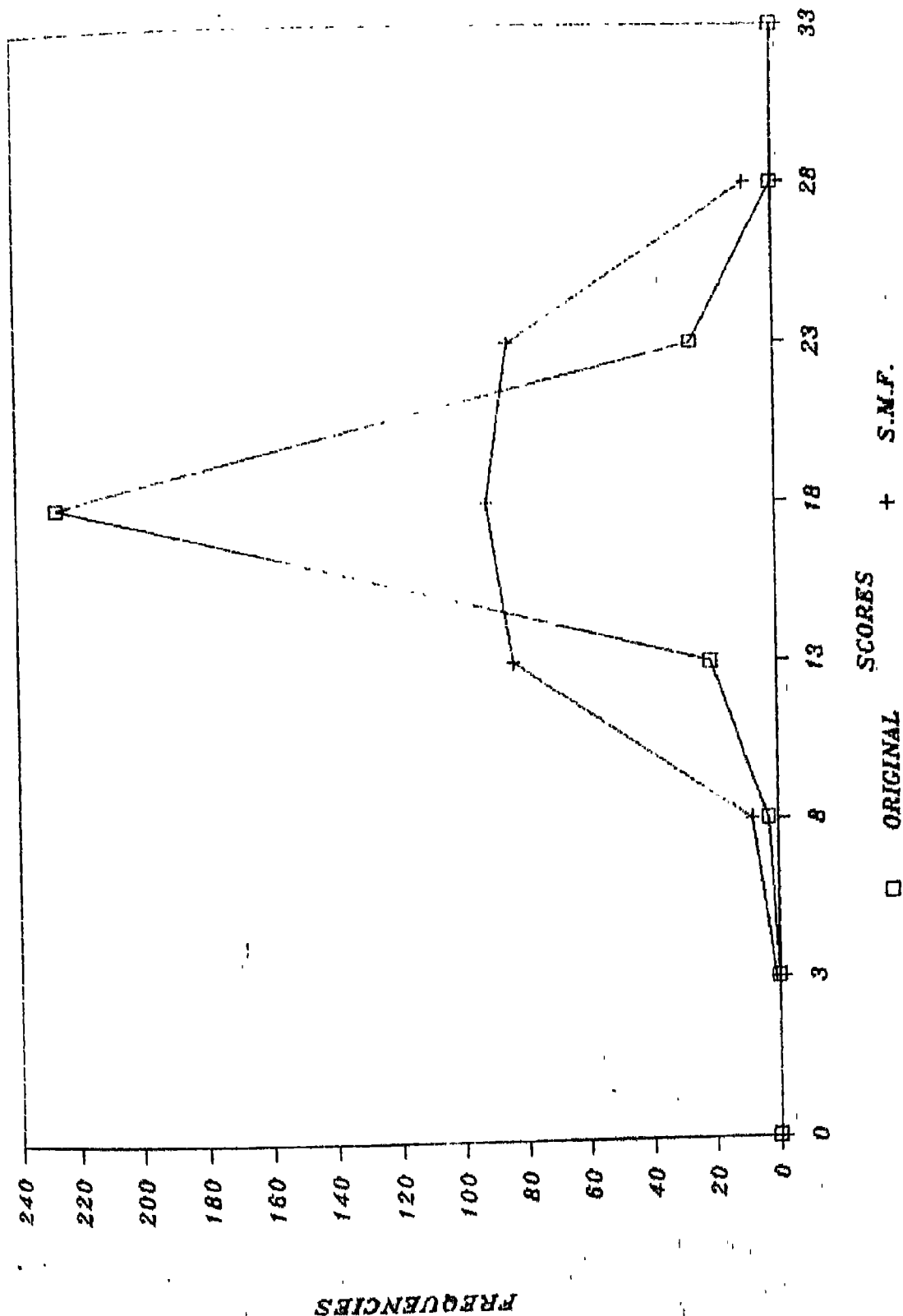
TABLE 4.81 (b)

RELEVANT STATISTICS OF P.C. SCORES

FOR THE TOTAL SAMPLE

N	Mean	Median	Mode	SD	SK	Kur
276	16.62	16.93	17.55	2.90	-0.320	0.280

The distribution of P.C. scores for the total sample is near normal. The skewness of the distribution is negative & is platykurtic in nature.

TABLE 4.81 (c)

FIDUCIARY LIMITS OF Mean & SD OF P.C. SCORES

FOR THE TOTAL SAMPLE

Statistic	S.E.	.95	.99
Mean	0.17	16.28 - 16.97	16.17 - 17.07
SD	0.12	2.66 - 3.15	2.58 - 3.22

The Fiduciary limits of Mean & SD for the P.C. scores of the total sample have very narrow ranges indicating the dependability of the sample statistics.

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Comparison of the Means of Components of S.R. scores
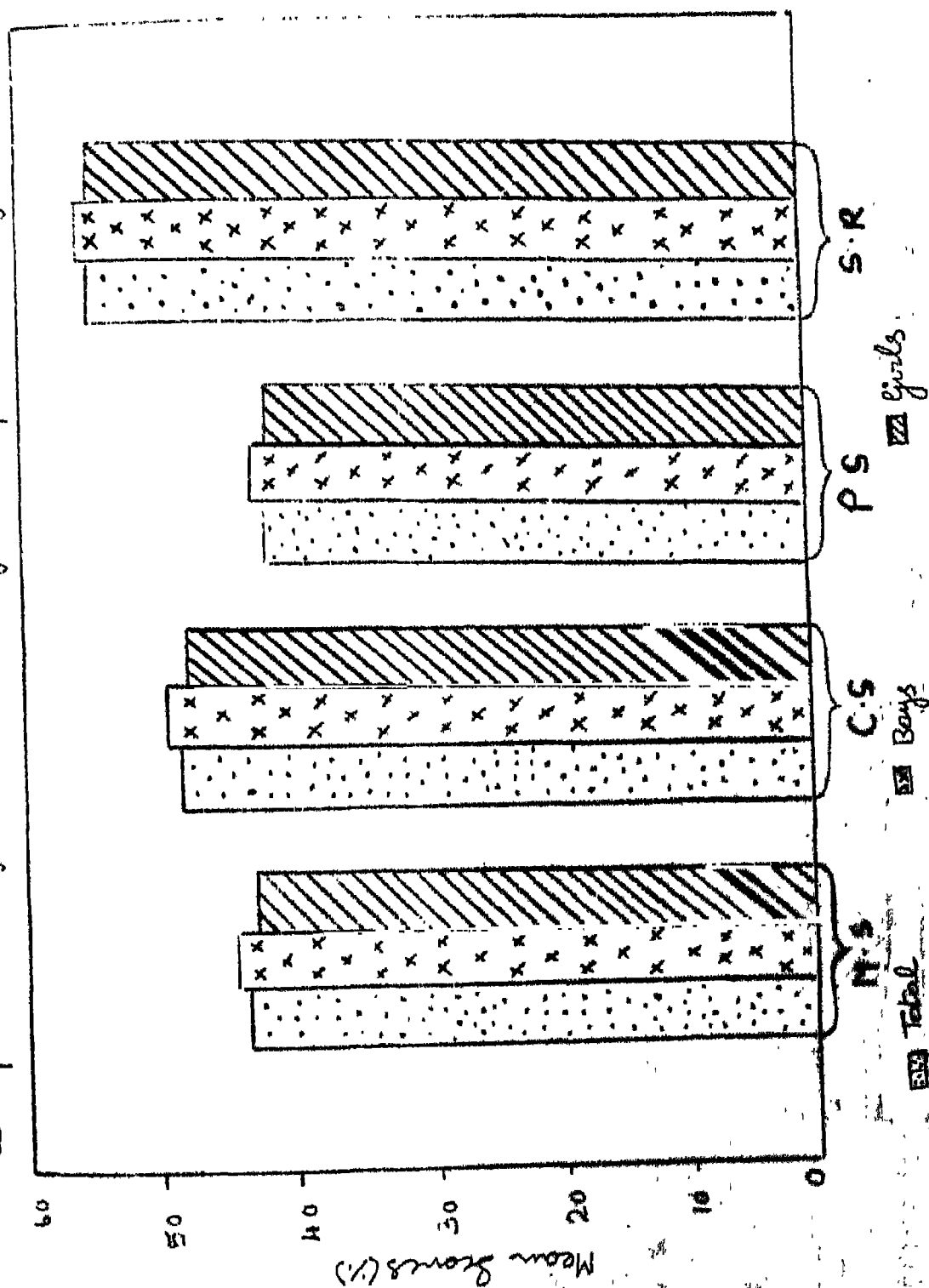
Fig 4·82

Comparison of A.A. scores at different tests.   Fig 4.83

MEAN SCORES

300
250
200
150
100
50
0

I^{st} U.T I^{st} S.E IInd U.T IInd S.E

Total   Boys   Girls
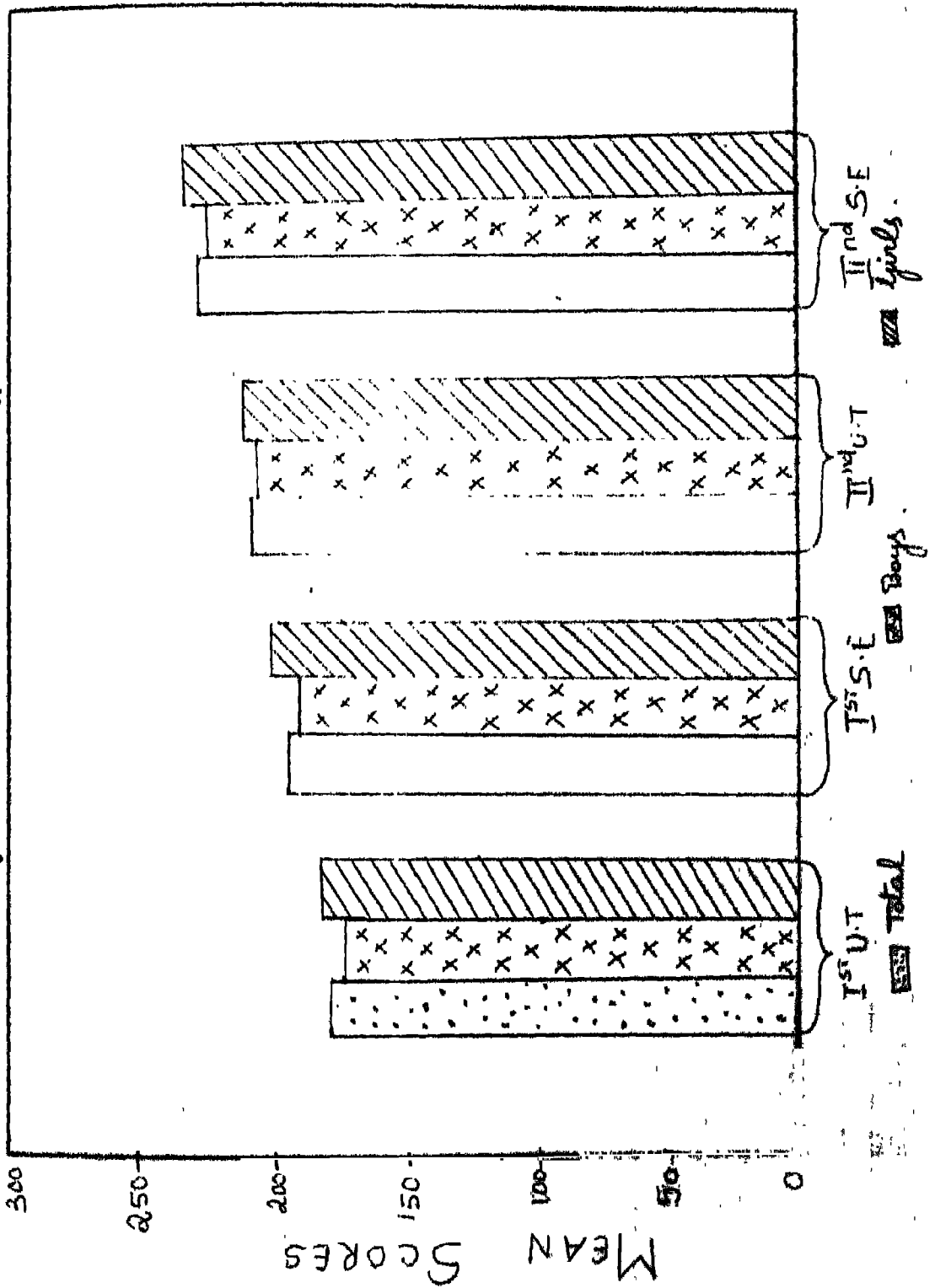
Comparison of Means of Components of A.A. Scores.   Fig 4.84
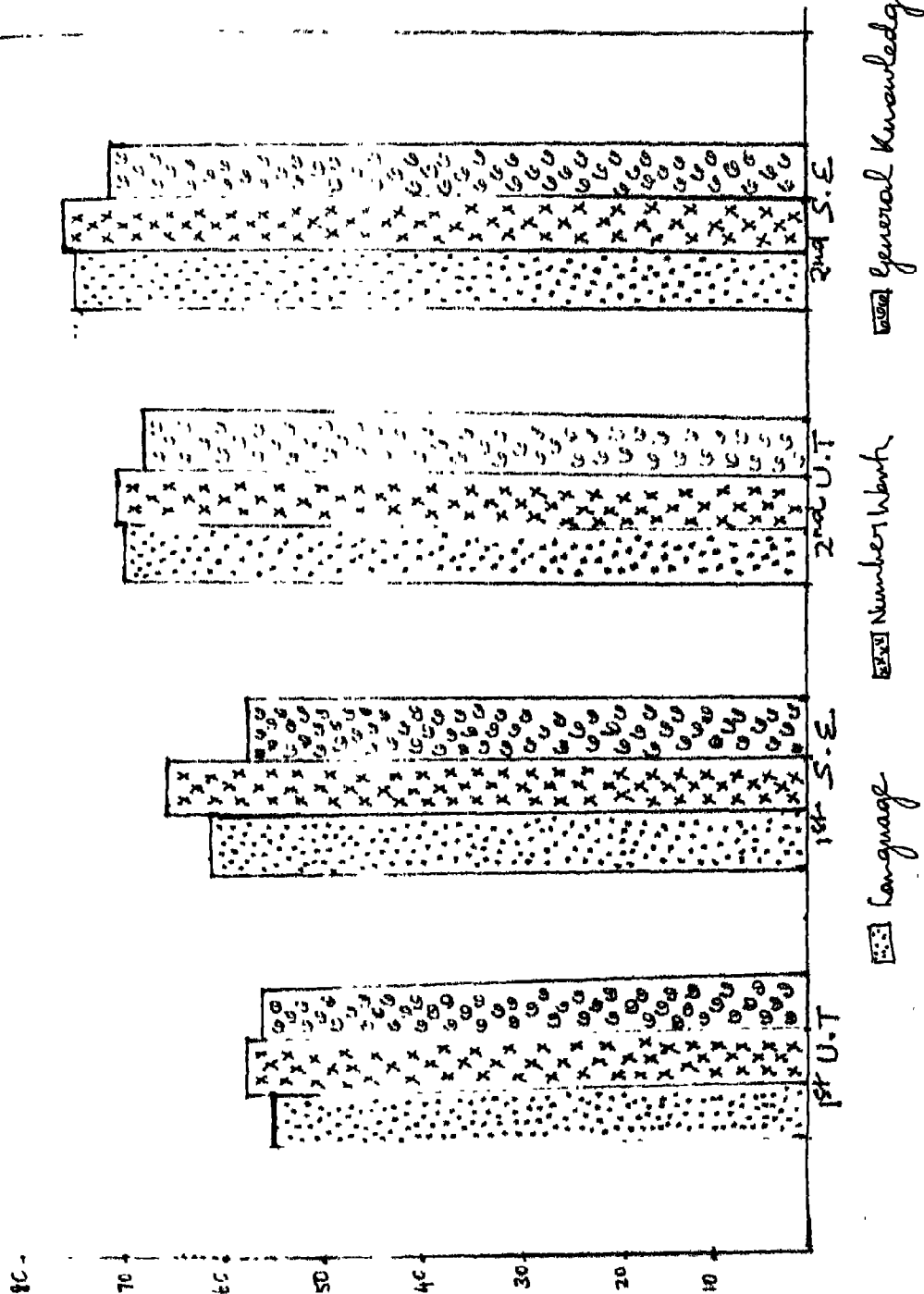
Comparison of the Means of Components of A. Scores at different tests

Fig 4·85

Legend: Language | Number Work | General Knowledge

X-axis: 1st U.T | 1st S.E | 2nd U.T | 2nd S.E

Y-axis: 10, 20, 30, 40, 50, 60, 70, 80

Comparison of Means of Components of S.A. levels   Fig 4.26

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Comparison of Means of P.E.T. Scores   Fig 4.8.7

Mean Scores

135   120   105   90   75

Total   Mothers   Fathers   Both Parents
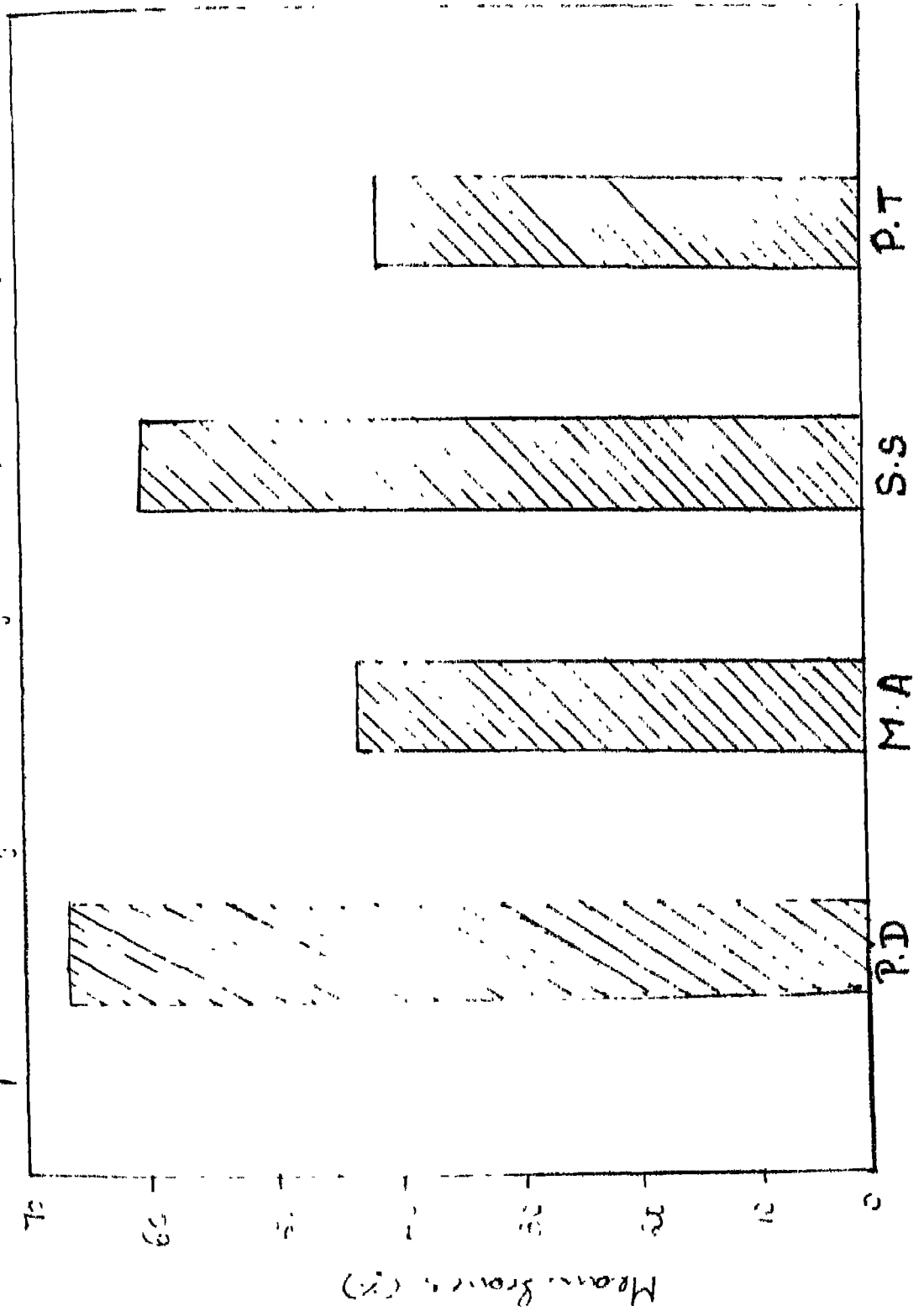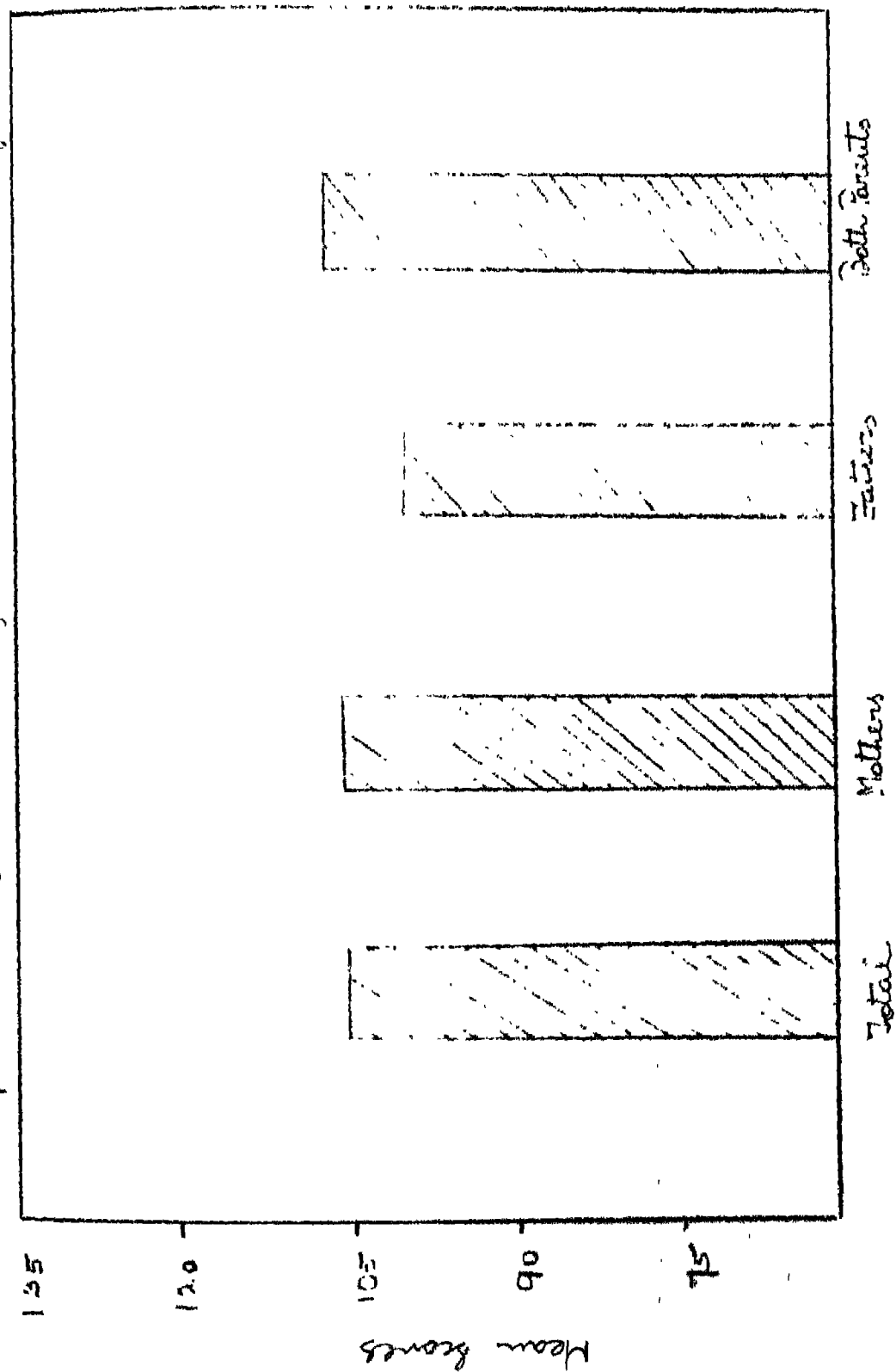
Comparison of Means of Components of P.I. Scores   Fig 4.53
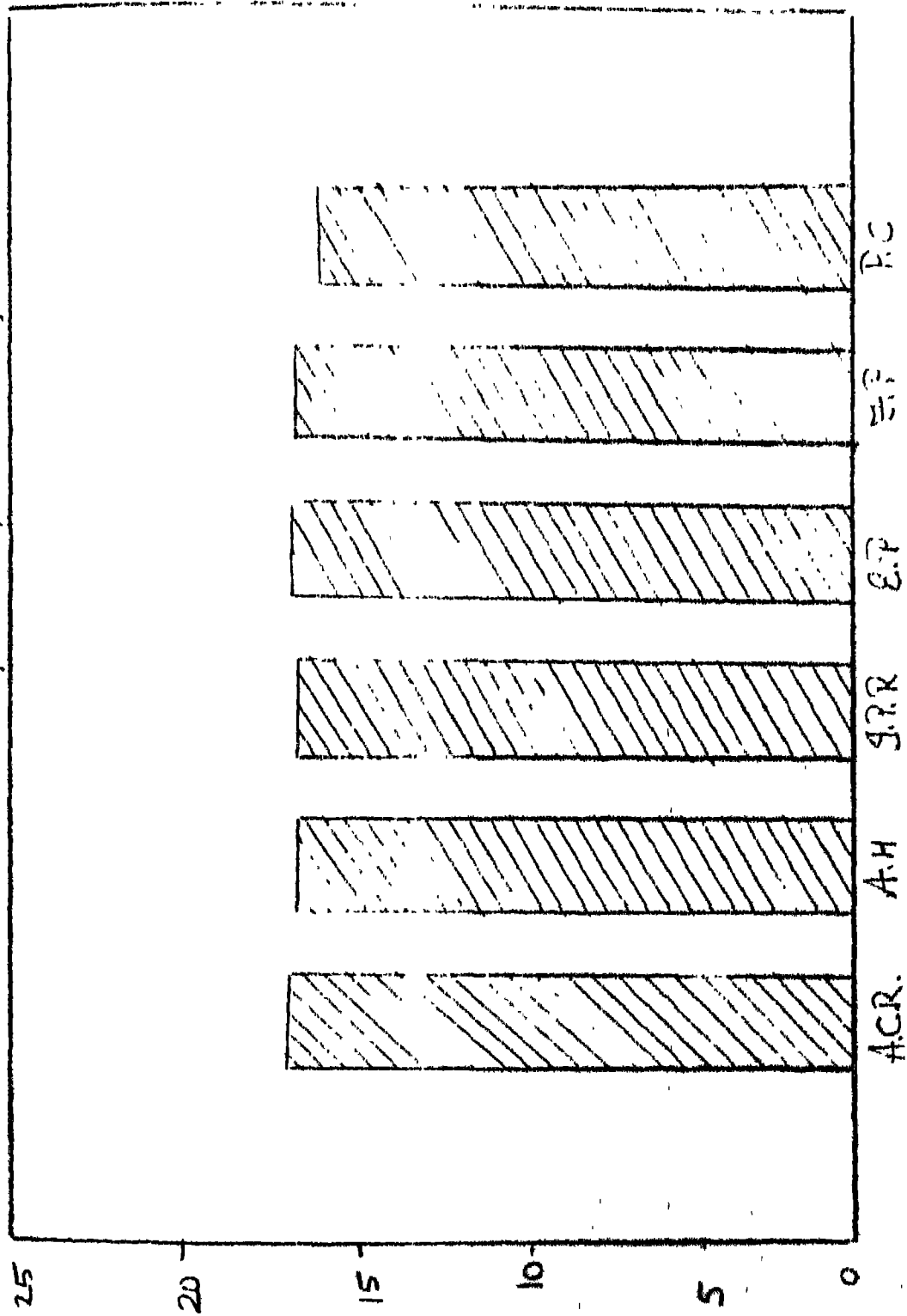
CHAPTER V

INFERENTIAL ANALYSIS

"Bare facts, objective data, never determine anything. They become significant only as interpreted in the light of accepted standards and assumptions, and these standards in the final analysis are not susceptible to scientific determination".[1] In ordinary life we seldom deal with bare facts but facts interpreted. This interpretation or evaluation is determined by the purpose to which we relate the facts.

Analysis is a process which enters into research in one form or another from the very beginning. Inferential analysis refers to the testing of the hypotheses. It helps in making accurate inferences by adopting levels of significance. The levels of significance applied to this study are the .05 or .01.

Hypotheses: Hypotheses are formulated to explain observed facts and conditions and to serve as a guide in the research process. They are tentative guesses expressing certain

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1 Sidhu S.K.: Methodology of Research in Education. New Delhi, Sterling Publishers Pvt. Ltd., 1985. pp. 274-275.

differences or relationships among variables. For the present research, hypothesis have been formulated in the null form. A null hypothesis states that there will be no statistically significant differences or relationship between groups and among variables." The null hypothesis always identifies the population and comparison group involved, and always specifies the nature of the difference or the relationship to be tested and how it will be measured".[1] Since null hypothesis predict no difference or relationship between or among treatment groups, they are also known as non-directional hypothesis. Null hypothesis are easier to deal with statistically because it is easier to state within predictable limits of certainty about evidence that two groups are different or correlated did not occur by chance.

Techniques Used For the Testing of Hypotheses

Testing of hypotheses requires the use of statistical techniques, which are broadly classified as parametric techniques and non-parametric techniques. Parametric techniques were adopted for the study as the data followed a normal distribution which can be observed in description of the data in Chapter IV and V.

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1 Cates W.M.: A Practical Guide to Educational Research.
   New Jersey, Prentice Hall, Inc. Englewood Cliffs. 1985.
   pp. 17 - 18.

In order to test the stated hypotheses in Chapter I, the following parametric techniques were employed. They are:

1. Correlation coefficient

2. Analysis of variance and

3. 't' - test

Parametric statistical techniques

1. Product - moment coefficient of correlation.

The statistical technique used to find out the relationship between two variables is "coefficient of correlation" "r" is often called "Pearson r" after Professor Karl Pearson who developed the product - moment method. For computing "r" the data was arranged in a scattergram in which the "x" variable represents class interval scores of S.R. and "y" variable represents class intervals of scores of A.A.

The following formula was used for computing the coefficient of correlation i.e. "r"

$$ r = \frac{\frac{\Sigma x^1 \ y^1}{N} - c x^1 \ cy}{\sigma^1 x \quad \sigma^1 y} $$

Where $\Sigma x^1 y^1$ = product of deviation from assumed mean of 'x' variable and the 'y' variable.

cx   = correlation in units of intervals of 'x' variable

cy   = correlation in units of intervals of 'y' variable

$\sigma^1 x$ = Standard deviation of the scores of 'x' variable.

$\sigma^1 y$ Standard deviation of the scores of 'y' variable.

Interpretation of 'r': The value of 'r' always lies between -1 and +1.

If 'r' is found to be negative it suggests inverse relationship between two variables i.e. an increase in one variable is along with a decrease in the other variable.

If 'r' is zero then there is no relationship between the two variables.

If 'r' is positive it suggests a direct relationship between the variables, i.e. an increase in one variable is along with an increase in the other variable.

The strength of association between variables can be decided on the basis of the following criteria given by J.W. Best.[1]

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[1] Best, J.W. : Research in Education. New Delhi, Prentice Hall of India Pvt. Ltd., (4th Edition 1983). p.255

Coefficient "r"	Relationship
0.00 to 0.20	Negligible
0.20 to 0.40	Low
0.40 to 0.60	Moderate
0.60 to 0.80	Substantial
0.80 to 1.00	High to very high

The significance of `r` is then determined and interpreted with reference to the table values of `r` for the corresponding degree of freedom 306.

2.   Analysis of Variance :

The analysis of variance introduced by Sir Ronald Fisher near the beginning of the twentieth century is widely used by behavioural and social scientists. As a class of statistical method "Anova" provides a means for analysing data that is both rigorous logically and mathematically and sufficiently broad to address questions, posed in a wide spectrum of investigations.[1]

Analysis of variance is a statistical technique employed in testing hypotheses where significance of the difference between the several means is derived irrespective

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1 Kruskal, W.H., Tamvy, J.M. : International Encyclopedia of Statistics. Vol. I. N.Y. The Free Press. 1978. p.541.

ut the size of the sample.

The main function performed by Anova is to compare systematically the mean response levels of two or more independent groups of observations or of a set of observation measured at two or more points in time.

The test of significance provides a sample based decision as to whether this hypotheses is supported or refuted.

Analysis of variance is based on the breakdown of the total sum of squares into the sums of squares within the component distributions and between the means of the confining distributions. This technique provides overall test of several samples simultaneously and tells us whether any of the difference are significant.

F ratio is computed by using the following formula:

$$F = \frac{\text{Mean square variance of among means of conditions}}{\text{Mean square variance of within conditions}}$$

Interpretation of F ratio : The numerical value of F ratio thus obtained is compared with F values in "Table F"[1] with

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1 Garrett, H.E.: Statistics in Psychology and Education. Toronto, Longmans Green and Company, 1985. pp.429-432.

degrees of freedom for "among means" and "within conditions".

If the obtained "F-ratio" is larger than the tabulated value of F at 0.01% or 0.05% levels, then F is said to be significant at 0.01% or 0.05% levels respectively. In such a case the null hypothesis is rejected. If the obtained F is smaller than the tabulated value of F, then F is said to be insignificant and the null hypothesis is accepted either at 0.05% or 0.01 level of significance depending upon the values obtained and tabulated F.

3. The 't' test or the Critical Ratio or 't' Ratio

When significance of the difference between two means is to be computed the 't' test is used. It involves the computation of the ratio between observed difference between two sample means and the sampling error factor.

The following formula is used for calculating the t-Test.

$$t = \frac{M_1 - M_2}{\sqrt{\dfrac{\sigma_1^2}{N_1} + \dfrac{\sigma_2^2}{N_2}}}$$

Where M_1 = Mean of the first group

M_2 = Mean of the second group

σ_1 = Standard deviation of the first group

σ_2 = Standard deviation of the second group

N_1 = Sample size of the first group

N_2 = Sample size of the second group

Interpretation of t: The critical ratio 't' for n-1 degree of freedom is found from Table D at 0.01% level. If the calculated 't' is greater than the tabulated 't' then the null hypothesis is rejected. Otherwise it is accepted.

As already mentioned the researcher has formulated a series of null hypotheses for proceeding with the study in a methodical manner. Those hypotheses expressing relationship are tested using correlational techniques, while the hypotheses comparing different categories of the sample are tested through the Anova F test or the 't' test.

The hypothesis are accepted or rejected on the basis of the obtained evidence being supportive or otherwise. They have been broadly categorised into 10 groups from A to J as follows:

A Group of Hypotheses

Hypotheses A.1 - A.5

The hypothesis of relationship between S.R. and

A.A. for P.S.C. are clubbed together to form this cluster. The relationship between S.R. and A.A. at different tests (i.e. 1st Unit Test, 1st S.E., 2nd Unit Test, and 2nd S.E.) are also tested. These are obtained from the correlation coefficients which are presented in Table 5.1. On the basis of comparison with the critical value of 'r' at .01 level for the corresponding degrees of freedom, the significance is determined.

TESTING OF HYPOTHESIS OF RELATIONSHIP BETWEEN S.R. AND A.A.

The following table shows the correlation obtained between S.R. and A.A.:

TABLE 5.1

CORRELATION MATRIX

SCHOLASTIC READINESS = ACADEMIC ACHIEVEMENT

	Total A.A.	A.A. at 1st U.T.	A.A. at 1st S.E.	A.A. at 2nd U.T.	A.A. at 2nd S.E.
Total S.R.	0.46 +++	0.64 ++++	0.51 +++	0.37 ++	0.24 ++
M.S.	0.39 ++	0.59 +++	0.48 +++	0.34 ++	0.22 ++
C.S.	0.47 +++	0.68 ++++	0.61 ++++	0.43 +++	0.33 ++
P.S.	0.41 +++	0.62 ++++	0.56 +++	0.39 ++	0.26 ++
C.E.L.	0.49 +++	0.71 ++++	0.59 +++	0.41 +++	0.32 ++

Coefficient "r"	Relationship	
0.00 to 0.20	Negligible	+
0.20 to 0.40	Low	++
0.40 to 0.60	Moderate	+++
0.60 to 0.80	Substantial	++++
0.80 to 1.00	High to very high	+++++

df   306

Significance of r at .05 = .148

Significance of r at .01 = .113

The significance of a relationship is determined on the basis of comparison with the critical values for the corresponding degrees of freedom.

Testing Hypothesis A.1.a

The null hypothesis A1a states that there is no significant relationship between S.R. and A.A. of Preschool children. The technique used in testing this hypothesis is the Product moment Co-efficient of Correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and the 'y' variable represents the class interval of scores of A.A. of P.S.C.. From the correlation Matrix presented in Table 5.1 the co-efficient of correlation between S.R. and A.A. is read as 0.46. This value of 'r' is

significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive and moderate relationship between S.R. and A.A. of Preschool children.

Testing Hypothesis A.1.b

The null hypothesis A.1.b states that there is no significant relationship between S.R. and A.A. (at 1st U.T.) of Preschool children. The technique used in testing this hypothesis is the Product moment co-efficient of Correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and the 'y' variable represents the class interval of scores of A.A. (at 1st U.T.) of P.S.C.. From the correlation Matrix presented in Table 5.1 the co-efficient of correlation between S.R. and A.A. (at 1st U.T.) is read as 0.64. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore, the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant positive and substantial relationship between S.R. and A.A. (at 1st U.T.) of Preschool children.

Testing Hypothesis A.1.c

The null hypothesis A.1.c states that there is no significant relationship between S.R. and A.A. (at 1st S.E.) of Preschool children. The technique used in testing this hypothesis is the Product moment co-efficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and the 'y' variable represents the class interval of scores of A.A. (at 1st S.E.) of P.S.C.. From the correlation Matrix presented in Table 5.1 the co-efficient presented in Table 5.1 the co-efficient of correlation between S.R. and A.A. (at 1st S.E.) is read as 0.51. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive and moderate relationship between S.R. and A.A. (at 1st S.E.) of Preschool children.

Testing Hypothesis A.1.d

The null hypothesis A.1.d states that there is no significant relationship between S.R. and A.A. (at 2nd U.T.) of Preschool children. The technique used in testing this hypothesis is the Product moment co-efficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and the 'y' variable represents the class interval of scores of A.A. (at 2nd U.T.) of P.S.C. From the correlation matrix presented in Table 5.1 the coefficient of correlation between S.R. and A.A. (at 2nd U.T.) is read as 0.37. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive but low relationship between S.R. and A.A. (at 2nd U.T.) of Preschool children.

Testing Hypothesis A.1.e

The null hypothesis A.1.e states that there is

no significant relationship between S.R. and A.A. (at 2nd S.E.) of Preschool children. The technique used in testing this hypothesis is the Product moment coefficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and 'y' variable represents the class interval of scores of A.A. (at 2nd S.E.) of P.S.C.. From the correlation Matrix presented in Table 5.1 the co-efficient of correlation between S.R. and A.A. (at 2nd S.E.) is read as 0.24. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive but low relationship between S.R. and A.A. (at 2nd S.E.) of Preschool children.

Conclusions and Discussions

On the basis of the analysis it can be concluded that S.R. is positively correlated with A.A. The correlation is significant at every stage from 1st U.T. through to the 2nd S.E. On the whole too the relationship is positive and significant though moderate. However, it may

be observed that the relationship decreases gradually with every test from substantial at 1st Unit Test to low at 2nd S.E. This is heartening to note since it is an indication that the child develops the skills necessary for A.A. as he progresses through the months. But since the relationship is positive and significant though low even at the 2nd S.E. it becomes important that the S.R. of the child be developed with special efforts. Appropriate programmes devised to develop the S.R. of P.S.C. would enable them to perform better in school. It will also have a great bearing on their "self concept" because, if tasks are easy at school, the coping up becomes smooth and vice-versa. Secondly the S.R. would also develop a positive approach and attitude to school since the child would like to do things that are easy and would like to avoid those tasks which are difficult. So, with the necessary S.R. as the tasks in the school would become easy, the child would develop a positive attitude to school. This in turn would contribute to a favourable attitude to learning in general and the entire process of learning is looked upon conducively.

Testing Hypothesis A.2.a

The hypothesis A.2.a states that there is no significant relationship between Motor Skills and A.A. of preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of M.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between M.S. and A.A. is read as 0.39. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. The obtained result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive but at .01 level i.e. the more the scores in M.S. the higher are likely to be the scores in A.A.

There is a significant, low but positive relationship between M.S. and A.A. of Preschool children.

Testing Hypothesis A.2.b

The hypothesis A.2.b states that there is no significant relationship between M.S. and A.A. (at 1st U.T.) of preschool children. The null hypothesis was tested using the product moment coefficient of correlation technique. A scattergram was drawn to compute the 'r' where in the class interval scores of M.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 1st U.T.)of P.S.C. is represented in the 'y' variable.

As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between M.S. and A.A. at 1st U.T. is read as 0.59. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive, moderate relationship at .01 i.e. the more the scores in M.S., the higher are likely to be the scores in A.A.

There is a significant, positive and moderate relationship between M.S. and A.A. of Preschool Children.

Testing Hypothesis A.2.c

The hypothesis states that there is no significant relationship between M.S. and A.A. (at 1st S.E.) of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of M.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 1st S.E.) of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the co-efficient of correlation between M.S. and A.A. (at 1st S.E.) is read as 0.48.

critical value of `r` for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained `r` denotes positive, moderate relationships at .01 level i.e. the more the scores in M.S., the higher are likely to be the scores in A.A.

There is a significant, positive and moderate relationship between M.S. and A.A. of Preschool children.

Testing Hypothesis A.2.d

The hypothesis A.2.d states that there is no significant relationship between M.s. and A.A. (2nd U.T.) of Preschool children. The null hypothesis was tested using the product moment coefficient of correlation technique.

A scattergram was drawn to compute the `r` where in the class interval scores of M.S. of P.S.C. is represented in the `x` variable and the class interval scores of A.A. (at 2nd U.T.) of P.S.C. is represented in the `y` variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between M.S. and A.A. (at 2nd U.T.) is read as 0.34. The critical value of `r` for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of

no relationship so the null hypothesis is rejected. The obtained 'r' denotes positive but low relationship at .01 level i.e. the more the scores in M.S., the higher are likely to be the scores in A.A.

There is a significant, positive but low relationship between M.S. and A.A. of preschool children.

Testing Hypothesis A.2.e

The hypothesis A.2.e states that there is no significant relationship between M.S. and A.A. (at 2nd S.E.) of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of M.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 2nd S.E.) of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between M.S. and A.A. (at 2nd S.E.) is read as 0.22. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive but low relationship i.e. the more the scores in M.S., the higher are likely to be the

scores in M.A.

There is a significant positive but low relationship between M.S. and A.A. (at 2nd S.E.) of preschool children.

Conclusions and Discussions

This analysis leads to the conclusion that M.S. is closely correlated with A.A. The correlation is positive and significant though low on the whole. It may be observed that the correlation varies from moderate at 1st U.T. to low at 2nd S.E. It may be surprising that the Motor skills seem to be an important factor contributing to the A.A. but it is the motor coordination and muscular control that helps the child acquire the reading-writing skills. Hence it is imperative that special concern may be shown while organising school curriculum and sessions for the pre-school children and opportunities for development of Motor skills be included. Sadly, it is just the reverse, the school routine usually never has any scope for development of motor muscular coordination. They are generally downward extension of primary routine and pre-school children are with no activities, in over crowded, cramped classrooms.

With this finding it becomes obligatory that the school personnel give careful consideration to the Motor

fills of P.S.C. and plan the sessions with appropriate activities for enhancing the same. They should be graded properly and offered at the pace of the group they are catering to.

Testing Hypothesis A.3:

Testing Hypothesis A.3.a

The hypothesis A.3.a states that there is no significant relationship between cognitive skills and Academic Achievement, of Pre-school children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of C.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.S. and A.A. is read as 0.47. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive, moderate relationship at .01 level i.e. the more the scores in C.S., the higher are likely to be the scores in A.A.

There is a significant, positive and moderate relationship between C.S. and A.A. of Preschool children.

Testing Hypothesis A.3.b

The null hypothesis A.3.b states that there is no significant relationship between C.S. and A.A. (at 1st U.T.) of preschool Children. The technique used in testing this hypothesis is the product moment coefficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of C.S. and the 'y' variable represents the class interval of scores of A.A. (at 1st U.T.) of P.S.C.. From the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.S. and A.A. (at 1st U.T.) is read as 0.68. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive and substantial relationship between C.S. and A.A. (at 1st U.T.) of preschool children.

Testing Hypothesis A.3.c

The hypothesis A.3.c states that there is no significant relationship between C.S. and A.A. (at 1st S.E.) of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the `r` where in the class interval scores of C.S. of P.S.C. is represented in the `x` variable and the class interval scores of A.A. (at 1st S.E.) of P.S.C. is represented in the `y` variable. As can be observed from the correlation Matrix presented in Table 5.1 the co-efficient of correlation between C.S. and A.A. (at 1st S.E.) is read as 0.61. The critical value of `r` for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained `r` denotes positive, substantial relationship at .01 level i.e. the more the scores in C.S., the higher are likely to be the scores in A.A.

There is a significant, positive and substantial relationship between C.S. and A.A. of preschool children.

Testing Hypothesis A.3.d

The null hypothesis A.3.d states that there is

no significant relationship between C.S. and A.A. (at 2nd U.T.) of Preschool children. The technique used in testing this hypothesis is the product moment coefficient of correlation.

The `r` was computed by drawing a scattergram in which the `x` variable represents the class interval scores of C.S. and the `y` variable represents the class interval of scores of A.A. (at 2nd U.T.) of P.S.C.. From the correlation matrix presented in Table 5.1 the coefficient of correlation between C.S. and A.A. (at 2nd U.T.) is read as 0.43. This value of `r` is significant at the .01 level as the critical value for significance of `r` at .01 level and .148 respectively for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive but moderate relationship between C.S. and A.A. (at 2nd U.T.) of Preschool children.

Testing Hypothesis A.3.e

The hypothesis A.3.e states that there is no significant relationship between C.S and A.A. (at 2nd S.E.) of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of C.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 2nd S.E.) of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.S. and A.A. (at 2nd S.E.) is read as 0.33. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive but low relationship at .01 level i.e. the more the scores in C.S.the higher are likely to be the scores in A.A.

There is a significant positive but low relationship between C.S. and A.A. (at 2nd S.E.) of preschool children.

Conclusions and Discussions

The conclusion that emerges from the foregoing analysis is that there is a strong relationship between C.S. and A.A.. The correlation is significant, positive and moderate. However, the correlation decreases gradually from substantial at 1st U.T. to low at 2nd S.E. All the same, throughout, the correlation is positive and significant. This implies that cognitive skills are an important factor

influencing the A.A. of P.S.C.. Since, the correlation is substantial to begin with attention should be paid to the strengthening of these skills. The beginning stages of school experience are important in that the child's basic understanding and comprehension of various concepts take place. Not surprisingly these would lay the foundations for further understanding and absorption of knowledge. It then becomes important that if a child is weak in C.S. he may be compensated with such experiences and activities that his C.S. would automatically develop. This apart, strengthening of C.S. would also help him to develop a favourable self-image and a positive attitude to schooling and learning. Many children from the underprivileged and the disadvantaged classes lack the necessary stimulation and motivation conducive for optimum development of cognitive skills. With careful planning of activities and experiences children would be able then to develop the necessary C.S.

Testing Hypothesis A.4

Testing Hypothesis A.4.a

The null hypothesis A.4.a states that there is no significant relationship between Psychosocial Skills and A.A. of Preschool children. The technique used in testing this hypothesis is the product moment coefficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of P.S. and the 'y' variable represents the class interval scores of A.A. of P.S.C.. From the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.S. and A.A. is read as 0.41. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive but low relationship between P.S. and A.A. of Preschool children.

Testing Hypothesis A.4.b

The hypothesis A.4.b states that there is no significant relationship between P.S. and A.A. (at 1st U.T.) of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of P.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 1st U.T.) of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in

Table 5.1 the coefficient of correlation between P.S. and A.A. (at 1st Unit Test) is read as 0.62. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive, substantial relationship at .01 level i.e. the more the scores in P.S., the higher are likely to be the scores in A.A.

There is a significant positive and substantial relationship between P.S. and A.A. of preschool children.

Testing Hypothesis A.4.c

The null hypothesis A.4.c states that there is no significant relationship between P.S. and A.A. (at 1st S.E.) of preschool children. The technique used in testing this hypothesis is the Product moment coefficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of P.S. and the 'y' variable represents the class interval scores of A.A. (at 1st S.E.) of P.S.C., From the correlation matrix presented in Table 5.1 the coefficient of correlation between P.S. and A.A. (at 1st S.E.) is read as 0.56. This

value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive and moderate relationship between P.S. and A.A. (at 1st S.E.) of Preschool children.

Testing Hypothesis A.4.d

The hypothesis A.4.d states that there is no significant relationship between P.S. and A.A. (at 2nd U.T.) of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of P.S. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 2nd U.T.) of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between P.S. and A.A. (at 2nd U.T.) is read as 0.39. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So, the null hypothesis is rejected. The

obtained 'r denotes positive, low-relationship at .01 level
i.e. the more the scores in P.S., the higher are likely to
be the scores in A.A.

There is a significant, positive but low
relationship between P.S. and A.A. of Preschool children.

Testing Hypothesis A.4.e

The null hypothesis A.4.e states that there is
no significant relationship between P.S. and A.A. (at 2nd
S.E.) of Preschool children. The technique used in testing
this hypothesis is the Product moment coefficient of
correlation.

The 'r' was computed by drawing a scattergram in
which the 'x' variable represents the class interval scores
of P.S. and the 'y' variable represents the class interval
scores of A.A. (at 2nd S.E.) of P.S.C. From the correlation
Matrix presented in Table 5.1 the coefficient of correlation
between P.S. and A.A. (at 2nd S.E.) is read as 0.26. This
value of 'r' is significant at the .01 level as the critical
value for significance of 'r' at .01 level is .148 for
degrees of freedom 306. Therefore the null hypothesis of no
relationship is rejected as the evidence is not supportive.

There is a significant, positive but low relationship between P.S. and A.A. (at 2nd S.E.) of preschool children.

Conclusions and Discussions

From the foregoing analysis it becomes evident that P.S. and A.A. are significantly correlated. The relationship is positive but low on the whole. It fluctuates from substantial at 1st U.I. to low at 2nd S.E. This then implies that Psychosocial skills are important for A.A. of P.S.C. It is the responsibility of the educators then to plan the programme in such a manner that there is ample scope for strengthening his P.S. The school entrance itself is a traumatic experience producing a lot of anxiety in the child. When a child enters school with the necessary Psychosocial skills he then somehow manages to cope up with the ever growing expectations of school. The situation becomes more difficult for children who do not possess the necessary P.S. Considering the importance of P.S. in establishing rapport and settling down to school routine it becomes important that due concern be shown in helping children develop the skill in Psychosocial area. Apart from helping him to take up the tasks expected of him he would get a smooth start. This would also enable him to develop a favourable attitude to school and its routine.

Testing Hypothesis A.5

Testing Hypothesis A.5.a

The hypothesis A.5.a states that there is no significant relationship between Comprehension of English Language and Academic Achievement of Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where in the class interval scores of C.E.L. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. of P.S.C. is represented in the 'y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.E.L. and A.A. is read as 0.49. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive, moderate relationship at .01 level i.e. the more the scores in C.E.L., the higher are likely to be the scores in A.A.

There is a significant, positive but moderate relationship between C.E.L. and A.A. of Preschool children.

Testing Hypothesis A.5.b

The null hypothesis A.5.b states that there is no significant relationship between C.E.L. and A.A. (at 1st U.T.) of Preschool children. The technique used in testing this hypothesis is the Product moment coefficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of C.E.L. and the 'y' variable represents the class interval scores of A.A. (at 1st U.T.) of P.S.C.. From the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.E.L. and A.A. (at 1st U.T.) is read as 0.71. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive and a substantial relationship between C.E.L. and A.A. (at 1st U.T.) of Preschool children.

Testing Hypothesis A.5.c

The hypothesis A.5.c states that there is no significant relationship between C.E.L. and A.A. (at 1st

.E.) of Preschool children. The null hypothesis was tested
using the Product moment coefficient of correlation
technique.

A scattergram was drawn to compute the 'r' where
in the class interval scores of C.E.L. of P.S.C. is
represented in the 'x' variable and the class interval scores
of A.A. (at 1st S.E.) of P.S.C. is represented in the 'y'
variable. As can be observed from the correlation Matrix
presented in Table 5.1 the co-efficient of correlation
between C.E.L. and A.A. (at 1st S.E.) is read as 0.59. The
critical value of 'r' for significance at .01 level is .148
for degrees of freedom 306. This result does not support the
hypothesis of no relationship. So the null hypothesis is
rejected. The obtained 'r' denotes positive, moderate
relationship at .01 level i.e. the more the scores in C.E.L.,
the higher are likely to be the scores in A.A.

There is a significant, positive and moderate
relationship between C.E.L. and A.A. of preschool children.

Testing Hypothesis A.5.d

The null hypothesis A.5.d states that there is
no significant relationship between C.E.L. and A.A. (at 2nd
U.T.) of Preschool children. The technique used in testing
this hypothesis is the Product moment coefficient of

correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of C.E.L. and the 'y' variable represents the class interval scores of A.A. (at 2nd U.T.) of P.S.C.. From the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.E.L. and A.A. (at 2nd U.T.) is read as 0.41. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant, positive but low relationship between C.E.L. and A.A. (at 2nd U.T.) of Preschool children.

Testing Hypothesis A.5.e

The hypothesis A.5.e states that there is no significant relationship between C.E.L. and A.A. (at 2nd U.T.) of preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique.

A scattergram was drawn to compute the 'r' where

in the class interval scores of C.E.L. of P.S.C. is represented in the 'x' variable and the class interval scores of A.A. (at 2nd S.E.) of P.S.C. is represented in the y' variable. As can be observed from the correlation Matrix presented in Table 5.1 the coefficient of correlation between C.E.L. and A.A. (at 2nd S.E.) is read as 0.32. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected. The obtained 'r' denotes positive, low relationship at .01 level i.e. the more the scores in C.E.L., the higher are likely to be the scores in A.A.

There is a significant positive but low relationship between C.E.L. and A.A. of preschool children.

Conclusions and Discussions

The conclusion that emerges from the above analysis is that there exists a strong correlation between C.E.L. and A.A. It is positive significant and moderate on the whole and is highest compared to all the other components of S.R. The correlation all the same decreases from substantial at 1st U.T. to low at 2nd S.E. This is not very surprising since comprehension of the English language seems to be a fundamental requirement as the medium of instruction is English. Hence if the necessary C.E.L. is present,

undertaking the school tasks become smooth and easy. The child would be able to feel comfortable as he is familiar with the words that are spoken and is able to grasp what is being told. When the requisite C.E.L. is not present the child apart from having difficulty in following what is happening in school would also tend to drift away from it all.

This then implies that, special care must be taken in this regard and children be helped in the area. Since most of our children come from homes where no English is spoken or used and unfortunately our schools barring a handful follow English as the medium of instruction, graded sessions be organised to improve language, particularly English. This would immensely benefit in improving the scores in A.A.

General Conclusions

On the whole it may be concluded that S.R. is significantly though moderately correlated to A.A., the magnitude of relationship decreases with time though, that is, it is substantial at 1st U.T. to begin with and decreases gradually with every test, to low at 2nd S.E. All the four components of S.R. are significantly correlated though in varying degrees. Of these the correlation of C.E.L. is highest, followed closely by C.S. The lowest correlation is

between M.S. and A.A. Another observation that emerges is that though at every test the correlation is highest between C.E.L. and A.A. the correlation of C.S. and A.A. on the whole is higher than all other components including C.L.L. i.e. correlation between C.E.L. and A.A. at every test is higher than C.S. but on the whole the correlation between C.S. and A.A. is higher than C.E.L.

L Group of Hypotheses

Hypotheses B1-B5

This group of hypotheses deals with the differential distribution of A.A. amongst the various levels of S.R. scores obtained by P.S.C.

The differences in the means of A.A. for the three categories are tested using Anova and the significance is tested at .05 level, or at .01 level.

The scores obtained in S.R. were arranged in descending order and the top 27% and the bottom 27% were taken as High scorers and Low scorers in S.R. The remaining middle group was put in the category of Moderate Scorers. Thus there were three categories obtained.

High scorers

Moderate scorers and

Low scorers in S.R. and their components.

TESTING OF HYPOTHESES OF DIFFERENCE IN A.A. ON THE BASIS OF LEVELS OF S.R.

Testing Hypothesis B.1.a

Hypothesis B.1.a in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of S.R. The difference among the means of A.A. of children with different levels of S.R. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of S.R. scores obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.2

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	23017.38	11508.69	
				13.14
Within Conditions	27	23642.09	875.63	

The value of F which is significant
(significance for F at .05 level 3.35 and .01 level = 5.49
for df 2, 27). The obtained evidence does not support the
null hypothesis of no significant difference among means of
A.A. Hence the hypothesis is rejected. There is a
significant difference in the A.A. of children with different
levels of S.R.

As F has emerged significant it is necessary to
treat the data to further process of testing. So, the
critical ratio test was applied to find out which of the 3
differences is significant.

TABLE 5.3

MEANs & SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF S.R.

Group	M	SD	SED	t	Level of Significance
High S.R.	218.35	28.05			
			13.02	3.72	Sig. at .01 level
Moderate S.R.	169.85	30.14			
High S.R.	218.35	28.05			
			14.07	4.64	Sig. at .01 level
Low S.R.	152.98	34.54			
Moderate S.R.	169.85	30.14			
			14.49	1.16	Not Sig
Low S.R.	152.98	34.54			

Significance of 't' at .05 level 2.04 and at 0.01 level 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate groups is 3.72 which is significant.

The 't' value for the difference between High and Low Groups in their A.A. is 4.64. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate and Low groups is 1.16 which is not significant.

Testing Hypothesis B.1.b

Hypothesis B.1.b in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of M.S. The difference among the means of A.A. of children with different levels of M.S. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of M.S,. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.4

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	15765.27	7882.63	
				11.40
Within Conditions	27	18676.10	691.71	

The value of F is significant (significance for) at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of A.A. Hence the hypothesis is rejected. There is a significant difference in the A.A. of children with different levels of M.S.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.5

MEANS & SDs OF A.A. OF CHILDREN WITH
DIFFERENT LEVELS OF M.S.

Group	M	SD	SED	t	Level of Significance
High M.S.	206.00	28.83			
			12.26	3.04	Sig. at .01
Moderate M.S.	168.70	25.93			
High M.S.	206.00	28.83			
			13.48	4.08	Sig. at .01
Low M.S.	151.00	31.40			
Moderate M.S.	168.70	25.93			
			12.88	1.37	Not Sig.
Low M.S.	151.00	31.40			

Significance of 't' at .05 level = 2.04 and at 0.01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate is 3.04 which is significant.

The 't' value for the difference between High and Low in their A.A. is 4.08. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate and Low levels is 1.37 which is not significant.

Testing Hypothesis B.1.c

Hypothesis B.1.c in the null form states that

there is no significant difference in the A.A. of Preschool children with different levels of C.S. The difference among the means of A.A. of children with different levels of C.S. is tested for significance using the ANOVA

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of C.S. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.6

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	20640.60	10320.30	
				7.70
Within Conditions	27	36209.70	1341.10	

The value of F is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of A.A. Hence the hypothesis is rejected. There is a significant difference in

the A.A. of children with different levels of C.S.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.7

MEANs & SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF C.S.

Group	M	SD	SED	t	Level of Significance
High C.S.	226.1	29.02			
			15.13	2.87	Sig. at .01 level
Moderate C.S.	182.6	38.05			
High C.S.	226.1	29.02			
			16.31	3.85	Sig. at .01 level
Low C.S.	163.4	42.62			
Moderate C.S.	182.6	38.05			
			18.07	1.06	Not Sig.
Low C.S.	163.4	42.62			

Significance of 't' at .05 level = 2.04, at .01 level = 2.77 for df 2,27 .

The 't' value for the difference between means of A.A. of High and Moderate is 2.87 which is significant.

The 't' value for the difference between High and Low in their A.A. is 3.85. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate and Low levels is 1.06 which is not significant.

Testing Hypothesis B.1.d

Hypothesis B.1.d in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of P.S.. The difference among the means of A.A. of children with different levels of P.S. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of P.S. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.8

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	17676.07	8338.03	
				6.06
Within Conditions	27	39359.80	1457.77	

The value of F which is 6.06 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of

A.A. Hence the hypothesis is rejected. There is a significant difference in the A.A. of children with different levels of P.S.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.9

MEANs & SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF P.S.

Group	M	SD	SED	t	Level of Significance
High P.S.	208.7	36.32			
			17.08	2.61	Sig. at .05 level
Moderate P.S.	164.2	39.95			
High P.S.	208.7	36.32			
			17.49	3.23	Sig. at .01 level
Low P.S.	152.3	41.69			
Moderate P.S.	164.2	39.95			
			18.26	0.65	Not Sig.
Low P.S.	152.3	41.69			

Significance of 't' at .05 level = 2.04, at .01 level = 2.77.

The 't' value for the difference between means of A.A. of High and Moderate is 2.61 which is significant at .05 level. The 't' value for the difference between High and Low in their A.A. is 3.23. This value of 't' is significant.

The 't value for difference in means of A.A. for Moderate and Low levels is .65 which is not significant.

Testing hypothesis B.1.e

Hypothesis B.1.e in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of C.E.L.. The difference among the means of A.A. of children with different levels of C.E.L. is tested for significance. using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of C.E.L. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.10

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	36498.60	18249.30	
				13.69
Within Conditions	27	35990.10	1332.97	

The value of F which is 13.69 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2. 27). The obtained evidence does not support the null hypothesis of no significant difference among means of A.A. Hence the hypotheses is rejected. There is a significant difference in the A.A. of children with different levels of C.E.L.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.11

MEANs & SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF C.E.L.

Group	M	SD	SED	t	Level of Significance
High C.E.L.	228.9	22.19			
			14.47	3.92'	Sig. at .01 level
Moderate C.E.L.	172.2	40.02			
High C.E.L.	22.9	22.19			
			16.80	4.98	Sig. at .01 level
Low C.E.L.	145.2	48.27			
Moderate C.E.L.	172.2	40.02			
			19.83	1.36	Not Sig.
Low C.E.L.	'45..'	48.27			

The significance of 't' at .05 level = 2.04 , at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate groups is 3.92 which is significant at .01 level.

The 't' value for the difference between High and Low groups in their A.A. is 4.98. This value of 't' is significant at .01 level.

The 't' value for difference in means of A.A. for moderate and Low levels is 1.36 which is not significant.

Conclusions and Discussions

The analysis of the results lead to the following conclusions - the high scorers in S.R. score high in A.A. and vice versa. This could be because being more ready scholastically they tend to be better equipped to meet the demands of the school better and thus cope with them. The high scorers in S.R. differ significantly in their A.A. scores compared to the Moderate and Low scorers. But the moderate S.R. scorers do not seem to differ significantly in their A.A. scores from the Low S.R. scorers. The same pattern can be observed with all the components of S.R. Hence it can be surmised that S.R.. and A.A. are closely associated with each other.

TESTING OF HYPOTHESES OF DIFFERENCE IN L.S. ON THE BASIS OF LEVELS OF S.R.

Testing Hypothesis B.2.a

Hypothesis B.2.a in the null form states that there is no significant difference in the L.S. of Preschool children with different levels of S.R. The difference among the means of L.S. of children with different levels of S.R. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the L.S. of children was on the basis of different levels of S.R. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.12

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	2248.20	1124.10	
				7.16
Within Conditions	27	4237.02	156.93	

The value of F which is 7.16 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of L.S. Hence the hypothesis is rejected. There is a significant difference in the L.S. of children with different levels of S.R.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.13

MEANs & SDs OF L.S. OF CHILDREN WITH

DIFFERENT LEVELS OF S.R.

Group	M	SD	SED	t	Level of Significance
High S.R.	72.13	11.78			
			5.43	2.93	Sig. at .01 level
Moderate S.R.	56.23	12.49			
High S.R.	72.13	11.78			
			5.59	3.60	Sig. at .01 level
Low S.R.	52.03	13.18			
Moderate S.R.	56.23	12.49			
			5.74	0.73	Not Sig.
Low S.R.	52.03	13.18			

Significance of 't' at .05 level 2.04, at .01 level 2.77 for df 2,27.

The 't' value for the difference between means of L.S. of High and Moderate groups is 2.93 which is significant.

The 't' value for the difference between High and Low groups in their L.S. is 3.60. This value of 't' is significant.

The 't' value for difference in means of L.S. for Moderate and Low groups is .73 which is not significant.

Testing Hypotheses B.2.b

The null hypothesis B.2.b states that there is no significant difference in the L.S. of pre-school children with different levels of M.S. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of M.S. obtained by children at different levels were used as criterion to classify the L.S. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.14

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1357.87	678.93	
				4.15
Within Conditions	27	4417.50	163.61	

The F value for the difference among means of L.S. of High, Moderate and Low groups is 4.15 which is significant at .05 level (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2 and 27). Therefore, the null hypothesis of no significant difference among means does not stand tenable at .05 level. There is a significant difference among the High, Moderate and Low groups in their L.S.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.15

MEANs & SDs OF L.S. OF CHILDREN WITH

DIFFERENT LEVELS OF M.S.

Group	M	SD	SED	t	Level of Significance
High M.S.	67.9	11.32			
			5.54	2.24	Sig. at .05 level
Moderate M.S.	57.5	13.37			
High M.S.	67.9	11.32			
			5.63	2.77	Sig. at .01 level
Low M.S.	54.3	13.75			
Moderate M.S.	57.5	13.27			
			6.07	0.53	Not Sig.
ow M.S.	54.3	13.75			

Significance of 't' at .05 level 2.04, at 0.01
level 2.77 for df 2, 27.

The 't' value for the difference between means of L.S. of
High and Moderate groups is 2.24 which is significant at .05
level.

The t' value for the difference between High and Low groups
in their L.S. is 2.77. This value of 't' is significant at
both levels.

The 't' value for difference in means of L.S. for Moderate
and Low levels is 0.53 which is not significant.

Testing Hypothesis B.2.c

Hypothesis B.2.c in the null form states that there is no significant difference in the L.S. of Preschool children with different levels of C.S. The difference among the means of L.S. of children with different levels of C.S. is tested for significance using the ANOVA

The criterion used for classifying the scores of the L.S. of children was on the basis of different levels of C.S. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.16

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	2006.47	1003.23	
				6.20
Within Conditions	27	4366.50	161.72	

The value of F which is 6.20 is significant

(significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of L.S. Hence the hypothesis is rejected. There is a significant difference in the L.S. of children with different levels of C.S.

As F has emerged significant it is necessary to treat the data to further process of testing. So the, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.17

MEANs & SDs OF L.S. OF CHILDREN WITH
DIFFERENT LEVELS OF C.S.

Group	M	SD	SED	t	Level of Significance
High C.S.	71.4	11.57			
			5.68	2.68	Sig. at .01 level
Moderate C.S.	56.2	13.72			
High C.S.	71.4	11.57			
			5.79	3.26	Sig. at .01 level
Low C.S.	52.5	14.21			
Moderate C.S.	56.2	13.72			
			6.25	0.59	Not Sig.
Low C.S.	52.5	14.21			

Significance of 't' at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of L.S. of High and Moderate groups is 2.68 which is significant.

The 't' value for the difference between High and Low groups in their L.S. is 3.26. This value of 't' is significant.

The 't' value for difference in Means of L.S. for Moderate and Low levels is .59 which is not significant.

Testing Hypothesis B.2.d

The null hypothesis B.2.d states that there is no significant difference in the L.S. of Preschool children with different levels of P.S. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of P.S. obtained by children at different levels were used as criterion to classify the L.S. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.18

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Squares	F
Between Groups	2	2006.47	1003.23	
				5.98
Within Conditions	27	4530.20	167.79	

The F value for the difference among means of L.S. of High, Moderate and Low Groups is 5.98 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2, 27). Therefore the null hypotheses of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low groups in their L.S.

As the F ratio refutes the null hypothesis, the 't test is applied to find out which of the differences is significant.

TABLE 5.19

MEANS & SDs OF L.S. OF CHILDREN WITH

DIFFERENT LEVELS OF P.S.

Group	M	SD	SE.D	t	Level of Significance
High P.S.	71.7	12.08			
			5.88	2.59	Sig. at .05 level
Moderate P.S.	56.5	13.5			
High P.S.	71.7	12.08			
			5.99	3.16	Sig. at .01 level
Low P.S.	52.8	14.00			
Moderate P.S.	56.5	13.5			
			6.15	0.60	Not Sig.
Low P.S.	52.8	14.00			

Significance at .05 level 2.04, .01 level 2.77 for df 2,27.

The 't' value for the difference between means of L.S. of High and Moderate groups is 2.59 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their L.S. is 3.16. This value of 't' is significant.

The 't' value for difference in means of L.S. for Moderate and Low levels is 0.60 which is not significant.

Testing Hypothesis B.2.e

Hypothesis B.2.e in the null form states that there is no significant difference in the L.S. of Preschool children with different levels of C.E.L.. The difference among the means of L.S. of children with different levels of C.E.L. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the L.S. of children was on the basis of different levels of C.E.L. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.20

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	2897.67	1448.93	
				8.55
Within Conditions	27	4575.50	169.46	

The value of F which is 8.55 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49

of 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of L.S. Hence the hypothesis is rejected. There is a significant difference in the L.S. of children with different levels of C.E.L..

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.21

MEANS & SDs OF L.S. OF CHILDREN WITH

DIFFERENT LEVELS OF C.E.L.

Group	M	SD	SED	t	Level of Significance
High C.E.L.	71.9	11.32	5.52	3.01	Sig. at .01 level
Moderate C.E.L.	55.3	13.30			
High C.E.L.	71.9	11.32	5.93	3.95	Sig. at .01 level
Low C.E.L.	48.5	14.93			
Moderate C.E.L.	55.3	13.30	6.32	1.08	Not Sig.
Low C.E.L.	48.5	14.93			

Significance at .05 level = 2.04, at .01 level = 2.77 for 2, 27.

The 't' value for the difference between means of L.S. of

High and Moderate groups is 3.01 which is significant. The 't' value for the difference between High and Low groups in their L.S. is 3.95. This value of 't' is significant. The 't' value for difference in means of L.S. for Moderate and Low levels is 1.08 which is not significant.

Conclusions and Discussions

The conclusion that emerges from these statistical analysis is that the scores of L.S. is interrelated with the scores of S.R. Children with high scores in S.R. significantly differ in their L.S. scores from those with Moderate and Low scores of S.R. The same pattern can be seen in the components of S.R. too. But between the Moderate and Low scorers of S.R. there is no significant difference in the L.S. scores. The highest difference in the L.S. scores is in the different levels of Comprehension of English language and Cognitive scores where even the High and Moderate differ significantly at .01 level.

The results may be because if the S.R. is high the child does not have any difficulty in developing language skills and thus score high and vice/versa. The general conducive environment available strengthens his Readiness for school tasks and thus prepare him to fare well. It may be then concluded that S.R. significantly influences the L.S. scores of P.S.C.

TESTING OF HYPOTHESES OF DIFFERENCE IN N.W. ON THE BASIS OF LEVELS OF S.R.

Testing Hypothesis B.3.a

Hypothesis B.3.a in the null form states that there is no significant difference in the N.W. of Preschool children with different levels of S.R. The difference among the means of N.W. of children with different levels of S.R. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the N.W. of children was on the basis of different levels of S.R. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.22

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Squares	Mean Squares	F
Between Groups	2	2944.69	1472.34	
				16.18
Within Conditions	27	2457.46	91.02	

The value of F which is 16.18 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of N.W. Hence the hypothesis is rejected. There is a significant difference in the N.W. of children with different levels of S.R.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.23

MEANs & SDs OF N.W. OF CHILDREN WITH

DIFFERENT LEVELS OF S.R.

Group	M	SD	SED	t	Level of Significance
High S.R.	72.95	10.82			
			4.39	4.36	Sig. at .01 level
Moderate S.R.	53.83	8.69			
High S.R.	72.95	10.82			
			4.52	4.98	Sig. at .01 level
Low S.R.	50.45	9.32			
Moderate S.R.	53.83	8.69			
			4.03	0.84	Not Sig.
Low S.R.	50.45	9.32			

Significance at .05 level = 2.04, at .01 level =
2.77 for df 2,27.

The 't' value for the difference between means of N.W. of
High and Moderate groups is 4.36 which is significant.

The 't' value for the difference between High and Low groups
in their N.W. is 4.98. This value of t is significant.

The t value for difference in means of N.W. for Moderate
and Low levels is .84 which is not significant.

Testing Hypothesis B.3.b

The null hypothesis B.3.b states that there is
no significant difference in the N.W. of Preschool children
with different levels of M.S. The technique used to test the
hypothesis is the one way classification of analysis of
variance (ANOVA)

The scores of the M.S. obtained by children at
different levels were used as criterion to classify the N.W.
scores. Since the sample size for the study is large and
different groups are not comparable in size, a random sample
of 10 children was taken, from each group for the purpose of
computing ANOVA.

TABLE 5.24

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1549.07	774.53	
				5.88
Within Conditions	27	3558.30	131.79	

The F value for the difference among means of N.W. of High, Moderate and Low Groups is 5.88 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2, 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low groups in their N.W.

As the F ratio refutes the null hypothesis, the t test is applied to find out which of the differences is significant.

TABLE 5.25

<u>MEANs & SDs OF N.W. OF CHILDREN WITH</u>

<u>DIFFERENT LEVELS OF M.S.</u>

Group	M	SD	SED	t	Level of Significance
High M.S.	68.9	11.41			
			5.05	2.18	Sig. at .05 level
Moderate M.S.	57.9	11.17			
High M.S.	68.9	11.41			
			5.44	3.20	Sig. at .01 level
Low M.S.	51.5	12.87			
Moderate M.S.	57.9	11.17			
			5.39	1.19	Not Sig.
Low M.S.	5.15	12.87			

Significance at .05 level = 2.04, at .01 level = . ' for df 2, 27.

'' - 't value for the difference between means of N.W. of '' and Moderate groups is 2.18 which is significant at .05 level.

'' t' value for the difference between High and Low groups their N.W. is 3.20. This value of 't' is significant at both levels.

The 't' value for difference is means of N.W. for Moderate and Low levels is 1.19 which is not significant.

Testing Hypothesis B.3.c

Hypothesis B.3.c in the null form states that there is no significant difference in the N.W. of Preschool children with different levels of C.S. The difference among the means of N.W. of children with different levels of C.S. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the N.W. of children was on the basis of different levels of C.S. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.26

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2409.80	1204.90	
				7.49
Within Conditions	27	4343.40	160.87	

The value of F which is 7.49 is significant (significance for F at 0.05 level is 3.35 and at 01 level =

s. p for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of N.W. Hence the hypothesis is rejected. There is a significant difference in the N.W. of children with different levels of C.S.

As F has emerged significant it is necessary to test the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.27

MEANs & SDs OF N.W. OF CHILDREN WITH
DIFFERENT LEVELS OF C.S.

Group	M	SD	SED	t	Level of Significance
High C.S.	72.9	11.53			
			5.51	2.87	Sig. at .01 level
Moderate C.S.	57.1	13.05			
High C.S.	72.9	11.53			
			5.75	3.67	Sig. at .01 level
Low C.S.	51.8	14.08			
Moderate C.S.	57.1	13.05			
			6.07	0.87	Not Sig.
Low C.S.	51.8	14.08			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of N.W. of High and Moderate groups is 2.87 which is significant.

The 't' value for the difference between High and Low groups in their N.W. is 3.67. This value of 't' is significant. The 't' value for difference in means of N.W. for Moderate and Low levels is .87 which is not significant.

Testing Hypothesis B.3.d

The null hypothesis B.3.d states that there is no significant difference in the N.W. of Preschool children with different levels of P.S. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of P.S. obtained by children at different levels were used as criterion to classify the N.W. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.28

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2006.47	1003.23	5.95
Within Conditions	27	4548.90	168.48	

The F value for the difference among means of N.W. of High, Moderate and Low groups is 5.95 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2,27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate & low groups in their N.W.

As the F ratio refutes the null hypothesis, the t test is applied to find out which of the differences is significant.

TABLE 5.29

MEANs & SDs OF N.W. OF CHILDREN WITH

DIFFERENT LEVELS OF P.S.

Group	M	SD	SED	t	Level of Significance
High P.S.	69.6	12.02			
			5.73	2.65	Sig. at .05 level
Moderate P.S.	54.4	13.55			
High P.S.	69.6	12.02			
			5.85	3.23	Sig. at .01 level
Low P.S.	50.7	14.05			
Moderate P.S.	54.4	13.55			
			6.17	0.60	Not Sig.
Low P.S.	50.7	14.05			

Significance at .05 level, at .01 level for df 2, 27.

The 't value for the difference between means of N.W. of High and Moderate groups is 2.65 which is significant at .05

.vel.

The 't' value for the difference between High and Low groups in their N.W. is 3.23. This value of 't' is significant. The 't' value for difference in means of N.W. for Moderate and Low levels is 0.60 which is not significant.

Testing Hypothesis B.3.e

Hypothesis B.3.e in the null form states that there is no significant difference in the N.W. of Preschool children with different levels of C.E.L. The difference among the means of N.W. of children with different levels of C.E.L. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the N.W. of children was on the basis of different levels of C.E.L. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.30

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	6034.87	3017.43	
				9.75
Within Conditions	27	8352.10	309.34	

The value of F which is 9.75 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of N.W. Hence the hypothesis is rejected. There is a significant difference in the N.W. of children with different levels of C.E.L.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.31

MEANs & SDs OF N.W. OF CHILDREN WITH
DIFFERENT LEVELS OF C.E.L.

Group	M	SD	SED	t	Level of Significance
High C.E.L.	80.4				
		15.21	7.50	3.56	Sig. at .01 level
Moderate C.E.L.	53.7				
High C.E.L.	80.4				
		18.19	7.73	4.22	Sig. at .01 level
Low C.E.L.	47.8				
Moderate C.E.L.	53.7				
		19.12	8.35	0.71	Not Sig.
Low C.E.L.	47.8				

Significance at .05 level, at .01 level for df 2, 27.

The 't' value for the difference between means of N.W. of High and Moderate groups is 3.56 which is significant.

The 't' value for the difference between High and Low groups in their N.W. is 4.22. This value of 't' is significant.

The 't' value for difference in means of N.W. for Moderate and Low levels is .71 which is not significant at any level.

Conclusions and Discussions

The interesting facts that are revealed from the proceeding analysis is that S.R. and N.W. are interrelated. Between the Moderate and low levels of S.R. and its components the difference does not seem to be significant.

This is because the favourable S.R. developed, helps the child to score favourably in N.W. and if the S.R. is not developed the child finds it difficult to cope up with the tasks of N.W.

TESTING OF HYPOTHESES OF DIFFERENCE IN G.K. ON THE BASIS OF LEVELS OF S.R.

Testing Hypothesis B.4.a

Hypothesis B.4.a in the null form states that

Significance at .05 level, at .01 level for df 2, 27.

The 't' value for the difference between means of N.W. of High and Moderate groups is 3.56 which is significant.

The 't' value for the difference between High and Low groups in their N.W. is 4.22. This value of 't' is significant.

The 't' value for difference in means of N.W. for Moderate and Low levels is .71 which is not significant at any level.

Conclusions and Discussions

The interesting facts that are revealed from the proceeding analysis is that S.R. and N.W. are interrelated. Between the Moderate and low levels of S.R. and its components the difference does not seem to be significant.

This is because the favourable S.R. developed, helps the child to score favourably in N.W. and if the S.R. is not developed the child finds it difficult to cope up with the tasks of N.W.

TESTING OF HYPOTHESES OF DIFFERENCE IN G.K. ON THE BASIS OF LEVELS OF S.R.

Testing Hypothesis B.4.a

Hypothesis B.4.a in the null form states that

there is no significant difference in the G.K. of Preschool children with different levels of S.R. The difference among the means of G.K. of children with different levels of S.R. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the G.K. of children was on the basis of different levels of S.R. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.32

SUMS OF SQUARES & MEANS OF VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2617.21	1308.61	
Within Conditions	27	2572.56	95.28	13.73

The value of F which is 13.73 is significant (significance for F at 0.05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of G.K. Hence the hypothesis is rejected. There is a significant difference in the G.K. of children with different levels of S.R.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.33

MEANs & SDs OF G.K. of CHILDREN WITH
DIFFERENT LEVELS OF S.R.

Group	M	SD	SED	t	Level of Significance
High S.R.	73.25	7.07	4.25	3.17	Sig. at .01 level
Moderate S.R.	59.78	11.41			
High S.R.	73.25	7.07	5.16	4.41	Sig. at .01 level
Low S.R.	50.5	14.71			
Moderate S.R.	59.78	11.41	5.89	1.58	Not Sig.
Low S.R.	50.5	14.71			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of G.K. of High and Moderate groups is 3.17 which is significant.

The 't' value for the difference between High and Low groups in their G.K. is 4.41. This value of 't' is significant.

The 't' value for difference in means of G.K. for Moderate and Low levels is 1.58 which is not significant.

Testing Hypothesis B.4.b

The null hypothesis B.4.b states that there is no significant difference in the G.K. of Preschool children with different levels of M.S. The technique used to test the hypothesis is the one way classification of analysis of variance. (ANOVA).

The scores of M.S. obtained by children at different levels were used as criterion to classify the G.K. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.34

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2476.07	1238.03	
				5.65
Within Conditions	27	5915.30	219.09	

The F value for the difference among means of G.K. of High, Moderate and Low groups is 5.65 which is significant (significance of F at .05 = 3.35 and at .01 = 5.49 for df 2,27). Therefore the null hypothesis of no

significant difference among means does not stand tenable. There is a significant difference among the High, moderate and Low Groups in their G.K.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.35

<u>MEANs</u> & <u>SDs</u> <u>OF</u> <u>G.K.</u> <u>OF</u> <u>CHILDREN</u> <u>WITH</u>

<u>DIFFERENT</u> <u>LEVELS</u> <u>OF</u> <u>M.S.</u>

Group	M	SD	SED	t	Level of Significance
High M.S.	67.2	14.86			
			6.27	2.22	Sig. at .05 level
Moderate M.S.	53.3	13.15			
High M.S.	67.2	14.86			
			4.77	4.61	Sig. at .01 level
Low M.S.	45.2	15.44			
Moderate M.S.	53.3	13.15			
			4.88	1.66	Not Sig.
Low M.S.	45.2	15.44			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of G.K. of High and Moderate groups is 2.22 which is

The 't' value for the difference between High and Low groups in their G.K. is 4.61. This value of 't' is significant.

The 't' value for difference in means of G.K. for Moderate and Low levels is 1.66 which is not significant at any level.

Testing Hypothesis B.4.c

Hypothesis B.4.c in the null form states that there is no significant difference in the G.K. of Preschool children with different levels of C.S. The difference among the means of G.K. of children with different levels of C.S. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the G.K. of children was on the basis of different levels of C.S. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.36

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2585.27	1292.63	
				7.25
Within Conditions	27	4812.60	178.24	

The value of F which is 7.25 is significant

(significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of G.K. Hence the hypothesis is rejected. There is a significant difference in the G.K. of children with different levels of C.S.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.37

MEANs & SDs OF G.K. OF CHILDREN WITH

DIFFERENT LEVELS OF C.S.

Group	M	SD	SED	t	Level of Significance
High C.S.	81.8	8.13	4.86	2.57	Sig. at .05 level
Moderate C.S.	69.3	13.05			
High C.S.	81.8	8.13	5.83	3.89	Sig. at .01 level
Low C.S.	59.1	16.56			
Moderate C.S.	69.3	13.05	6.67	1.53	Not Sig.
Low C.S.	59.1	16.56			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of G.K. of High and Moderate groups is 2.57 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their G.K. is 3.89. This value of 't' is significant.

The 't' value for difference in means of G.K. for Moderate and Low levels is 1.53 which is not significant at any level.

Testing Hypothesis B.4.d.

The null hypothesis B.4.d states that there is no significant difference in the G.K. of Preschool children with different levels of P.S. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of P.S. obtained by children at different levels were used as criterion to classify the G.K. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.38

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1883.40	941.70	
				6.09
Within Conditions	27	4172.10	154.52	

The F value for the difference among means of G.K. of High, Moderate and Low groups is 6.09 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2, 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low groups in their G.K.

As the F ratio refutes the null hypothesis the 't' test is applied to find out which of the differences is significant.

TABLE 5.39

MEANs & SDs OF G.K. OF CHILDREN WITH

DIFFERENT LEVELS OF P.S.

Group	M	SD	SED	t	Level of Significance
High P.S.	67.4	12.29			
			5.69	2.48	Sig. at .05 level
Moderate P.S.	53.3	13.14			
High P.S.	67.4	12.29			
			5.86	3.17	Sig. at .01 level
Low P.S.	48.8	13.89			
Moderate P.S.	53.3	13.14			
			6.05	0.74	Not Sig.
Low P.S.	48.8	13.89			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of G.K. of High and Moderate groups is 2.48 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their G.K. is 3.17. This value of 't' is significant at .01 level

The 't' value for difference in means of G.K. for Moderate and low levels is 0.74 which is not significant.

Testing Hypothesis B.4.e.

Hypothesis B.4.e. in the null form states that

there is no significant difference in the G... of Preschool children with different levels of C.E.L.. The difference among the means of G.K. of children with different levels of C.E.L. is tested for significance using the ANOVA.

The criterion used for classifying the scores of the G.K. of children was on the basis of different levels of C.E.L. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.40

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	3837.80	1918.90	
				8.81
Within Conditions	27	5878.90	217.74	

The value of F which is 8.81 is significant (significance for F at .05 level = 3.35 and .01 level = 5.49 for df 2, 27). the obtained evidence does not support the null hypothesis of no significant difference among means of G.K. Hence the hypothesis is rejected. There is a significant difference in the G.K. of children with different

levels of C.E.I..

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.41

MEANs & SDs OF G.K. OF CHILDREN WITH

DIFFERENT LEVELS OF C.E.L.

Group	M	SD	SED	t	Level of Significance
High C.E.L.	76.6	4.59			
			4.84	2.77	Sig. at .01 level
Moderate C.E.L.	63.2	14.60			
High C.E.L.	76.6	4.59			
			6.62	4.18	Sig. at .01 level
Low C.E.L.	48.9	20.44			
Moderate C.E.L.	63.2	14.60			
			7.94	1.80	Not Sig.
Low C.E.L.	48.9	20.44			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of G.K. of High and Moderate groups is 2.77 which is significant.

The 't' value for the difference between High and Low groups in their G.K. is 4.18. This value of 't' is significant.

The 't' value for difference in means of G.K. for Moderate and Low levels is 1.80 which is not significant.

C Group of Hypotheses

Hypothesis C1-C5

This group encompasses these null hypotheses which deal with the differential distribution of S.R. and A.A. scores among the boys and girls.

The significance of the difference between the means of S.R. and A.A. scores of boys and girls is determined by applying the 't' test or the critical ratio technique. The level of significance is obtained by comparison with the respective critical values.

TESTING OF HYPOTHESIS OF GENDER DIFFERENCES IN S.R. AND A.A.

Testing Hypothesis C.1.a

Hypothesis C.1.a in the null form states that there is no significant difference in the S.R. of Boys and Girls. The critical ratio technique is applied to test the significance of difference in the means of S.R. of boys and girls.

TABLE 5.42

MEANs AND SDs OF S.R. SCORES OF BOYS AND GIRLS

Group	Number	Means	SDs	SED	t	Sig
Boys	199	47.11	22.11			
				2.60	0.33	N.S.
Girls	109	46.23	21.71			

The value of 't' for the difference of Means of S.R. of the boys and girls is found to be 0.33. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.33 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the S.R. of boys and girls.

Testing of Hypothesis C.1.b

Hypothesis C.1.b in the null form states that there is no significant difference in the M.S. of boys and girls. The critical ratio technique is applied to test the significance of difference of means of boys and girls.

TABLE 5.43

MEANs AND SDs OF M.S. OF BOYS AND GIRLS

Group	Number	Means	SDs	SED	t	Sig
Boys	199	13.58	6.71			
				0.77	0.40	N.S.
Girls	109	13.27	6.49			

The value of 't' for the difference of Means of M.S. of the boys and girls is found to be 0.40. the critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the M.S. of boys and girls.

Testing hypothesis C.1.c

Hypothesis C.1.c in the null form states that there is no siginificant difference in the C.S. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of C.S. of boys and girls.

TABLE 5.44

MEANs AND SDs OF C.S. OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	14.96	5.41			
				0.61	0.89	N.S.
Girls	109	14.42	5.20			

The value of 't' for the difference of Means of C.S. of the boys and girls is found to be 0.89. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.89 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the C.S. of boys and girls.

Testing of Hypothesis C.1.d

Hypothesis C.1.d in the null form sates that there is no significant difference in the P.S. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of P.S. of boys and girls.

TABLE 5.45

MEANs AND SDs OF P.S. OF BOYS AND GIRLS

Group	Number	Means	SDs	SED	t	Sig
Boys	199	12.80	6.31			
				0.77	0.26	N.S.
Girls	109	13.00	6.54			

The value of 't' for the difference of Means of P.S. of the boys and girls is found to be 0.26. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.26 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the P.S. of boys and girls.

Testing of Hypothesis C.1.e

Hypothesis C.1.e in the null form states that there is no significant difference in the C.E.L. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of C.E.L. of boys and girls.

TABLE 5.46

MEANs AND SDs OF C.t.L. OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	195	5.69	2.12			
				0.24	0.70	N.S.
Girls	109	5.52	2.29			

The value of 't' for the difference of Means of C.t.L. of the boys and girls is found to be 0.70. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.70 therefore is not significant at both the levels. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

TABLE 5.47

MEANs & SDs OF S.R. AND ITS COMPONENTS

OF BOYS AND GIRLS

Group		Number	Means	SDs	SED	t	Level of Significance
S.R.	Boys	199	47.11	22.11	2.60	0.33	N.Sig.
	Girls	109	46.23	21.71			
M.S.	Boys	199	13.58	6.71	0.77	0.40	N.Sig.
	Girls	109	13.27	6.49			
C.S.	Boys	199	14.96	5.41	0.61	0.89	N.Sig.
	Girls	109	14.42	5.20			
P.S.	Boys	199	12.80	6.31	0.77	0.26	N.Sig.
	Girls	109	13.00	6.54			
C.E.L.	Boys	199	5.69	2.12	0.24	0.70	N.S.
	Girls	109	5.52	2.29			

Conclusions and Discussions

It is clearly evident that gender does not seem to be an important factor affecting the S.R. Even in the components one can note that there is no significant difference among the boys and girls. But considering the means of S.R., the boys seem to score slightly higher than the girls. Even in the components, the boys seem to have an edge over the girls excepting in P.S. where the girls seem to score slightly higher. Could it be that the male children are valued more in Indian society and hence stimulation offered to them is more?

TESTING OF HYPOTHESIS OF GENDER DIFFERENCES IN S.R. AND A.A.

Testing of Hypothesis C.2.a.

Hypothesis C.2.a in the null form states that there is no significant difference in the A.A. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of A.A. of boys and girls.

TABLE 5.4B

MEANS AND SDs OF A.A. OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	196.29	61.49			
				7.43	0.11	N.S.
Girls	109	197.17	62.87			

The value of 't' for the difference of Means of A.A. of the boys and girls is found to be 0.11. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.11 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the A.A. of boys and girls.

Testing of Hypothesis C.2.b

Hypothesis C.2.b in the null form states that there is no significant difference in the A.A. (at 1st U.T.) of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of A.A. (at 1st U.T.) of boys and girls.

TABLE 5.49

MEANs AND SDs OF A.A. (AT 1ST U.T.)

OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	168.90	59.84			
				7.33	0.67	N.S.
Girls	109	173.78	62.48			

The value of 't' for the difference of Means of A.A. (at 1st U.T.) of the boys and girls is found to be 0.67. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.67 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the A.A. (at 1st U.T.) of boys and girls.

Testing of hypothesis C.2.c

Hypothesis C.2.c in the null form states that there is no significant difference in the A.A. (at 1st S.E.)of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of A.A. (at 1st S.E.) of boys and girls.

TABLE 5.50

MEANS AND SDs OF A.A. AT 1ST S.E. OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	182.60	60.77			
				7.28	0.71	N.S.
Girls	109	187.78	61.18			

The value of 't' for the difference of Means of A.A. (at 1st S.E.) of the boys and girls is found to be .71. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the A.A. (1st S.E.) of boys and girls.

Testing of Hypothesis C.2.d

Hypothesis C.2.d in the null form states that there is no significant difference in the A.A. (at 2nd U.T.) of boys and Girls. The critical ratio technique is applied to test the significance of difference of means of A.A. (at 2nd U.T.) of boys and girls.

TABLE 5.51

MEANs AND SDs OF A.A. (AT 2ND U.T.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	207.22	61.01			
				7.29	0.48	N.S.
Girls	109	210.70	61.19			

The value of 't' for the difference of Means of A.A. (at 2nd U.T.) of the boys and girls is found to be 0.48. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.48 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the A.A. (at 2nd U.T.) of boys and girls.

Testing of Hypothesis C.2.e

Hypothesis C.2.e in the null form states that there is no significant difference in the A.A. (at 2nd S.E.) of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of A.A. (at 2nd S.E.) of boys and girls.

TABLE 5.52

MEANS AND SDs OF A.A. (2ND S.E.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	221.91	52.14			
				6.07	0.30	N.S.
Girls	109	223.78	50.38			

The value of 't' for the difference of Means of A.A. (2nd S.E.) of the boys and girls is found to be 0.30. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.30 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the A.A. (2nd S.E.) of boys and girls.

TABLE 5.53

MEANS AND SDs OF A.A. AT DIFFERENT TESTS OF BOYS AND GIRLS

	Group	Number	Means	SDs	SED	t	Level of Significance
A.A.	Boys	199	196.29	61.49			
	Girls	109	197.17	62.87	7.43	0.11	N.S.
At 1st U.T.	Boys	199	168.90	59.84			
	Girls	109	173.78	62.48	7.33	0.67	N.S.
At 1st S.E.	Boys	199	182.60	60.77			
	Girls	109	187.78	61.18	7.28	0.71	N.S.
At 2nd U.T.	Boys	199	207.22	61.01			
	Girls	109	210.70	61.19	7.29	0.48	N.S.
At 2nd S.E.	Boys	199	221.91	52.14			
	Girls	109	223.78	50.38	6.07	0.30	N.S.

Conclusions and Discussions

The conclusion that emerges from the foregoing analysis is that sex does not seem to affect the A.A. of P.S.C. No significant difference is observed in the A.A. on the whole between boys and girls. The same observation can be noted in each of the tests from 1st U.T. to 2nd S.E. But when the means are taken into consideration, the girls seem to edge over the boys on both counts – on the whole scores and at every test. Could this be because the girls tend to be more hardworking than boys and Indian culture infuses being more.

TESTING OF HYPOTHESIS OF GENDER DIFFERENCES IN L.S.

Testing Hypothesis C.3.a

Hypothesis C.3.a in the null form states that there is no significant difference in the L.S. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of L.S. of boys and girls.

TABLE 5.54

MEANS AND SDs OF L.S. OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig.
Boys	199	64.70	21.36			
				2.62	1.18	N.S.
Girls	109	67.79	22.40			

The value of 't' for the difference of Means of L.S. of the boys and girls is found to be 1.18. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 1.18 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the L.S. of boys and girls.

Hypothesis C.3.b in the null form states that there is no significant difference in the L.S. (1st U.T.) of Boys and girls. The critical ratio technique is applied to test the significance of difference of means of L.S. (1st U.T.) boys and girls.

TABLE 5.55

MEANS AND SDs OF L.S. (AT 1ST U.T.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig.
Boys	199	56.00	22.64			
				2.71	0.36	N.S.
Girls	109	56.97	22.83			

The value of 't' for the difference of Means of L.S. (1st U.T.) of the boys and girls is found to be 0.36. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.36 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the L.S. (1st U.T.) of boys and girls.

Testing Hypothesis C.3.c

Hypothesis C.3.c in the null form states that there is no significant difference in the L.S. (1st S.E.) of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of L.S. (1st S.E.) of boys and girls.

TABLE 5.56

MEANS AND SDs OF L.S. (1ST S.E.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	60.83	22.20			
				2.06	0.84	N.S.
Girls	109	62.57	21.56			

The value of 't' for the difference of Means of L.S. (1st S.E.) of the boys and girls is found to be 0.84. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.84 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the L.S.(1st S.E.) of boys and girls.

Testing Hypothesis C.3.d

Hypothesis C.3.d in the null form states that there is no significant difference in the L.S. (2nd U.T.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of L.S. (2nd U.T.) of boys and girls

TABLE 5.57

MEANs AND SDs OF L.S. (2ND U.T.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig.
Boys	199	70.37	20.27			
				2.4	0.004	N.S.
Girls	109	70.36	20.07			

The value of 't' for the difference of Means of L.S. (2nd U.T.) of the boys and girls is found to be 0.004. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.004 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the L.S. (2nd U.T.) of boys and girls.

Testing of Hypothesis C.3.e.

Hypothesis C.3.e in the null form states that there is no significant difference in the L.S. (2nd S.E.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of L.S. (2nd S.E.) of boys and girls.

TABLE 5.58

MEANs AND SDs OF L.S. (2ND S.E.) OF BOYS AND GIRLS.

Group	Number	Means	SD	SED	t	Sig.
Boys	199	74.60	16.99			
				1.97	0.56	N.S.
Girls	109	75.69	16.25			

The value of 't' for the difference of Means of L.S. (2nd S.E.) of the boys and girls is found to be 0.56. the critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.56 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the L.S. (2nd S.E.) of boys and girls.

TABLE 5.59

MEANS AND SDs OF L.S. AT DIFFERENT LEVELS OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Level of Significance
L.S. Boys	199	64.70	21.36			
				2.62	1.18	N.S.
Girls	109	67.79	22.40			
At 1st Boys U.T.	199	56.00	22.64			
				2.71	0.36	N.S.
Girls	109	56.97	22.83			
At 1st Boys S.E.	199	60.83	22.20			
				2.06	0.84	N.S.
Girls	109	62.57	21.56			
At 2nd Boys U.T.	199	70.37	20.27			
				2.40	0.004	N.S.
Girls	109	70.36	20.07			
At 2nd Boys S.E.	199	74.60	16.99			
				1.97	0.56	N.S.
Girls	109	75.69	16.25			

Conclusions and Discussions

On the basis of the analysis it my be concluded that sex of the child does not seem to affect the L.S. of P.S.C. Among the boys and girls, significant difference has not emerged in the L.S. However, considering the means one can see that the girls seem to score over the boys. This is not very surprising since 'Child Development Experts' have claimed that language development is slightly faster and earlier in girls compared to boys.

TESTING OF HYPOTHESIS OF GENDER DIFFERENCES IN N.W.

Testing of Hypothesis C.4.a.

Hypothesis C.4.a in the null form states that there is no significant difference in the N.W. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of N.W. of boys and girls.

TABLE 5.60

MEANS AND SDs OF N.W. OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	68.21	23.26			
				2.72	0.72	N.S.
Girls	109	66.23	22.73			

The value of 't' for the difference of Means of N.W. of the boys and girls is found to be 0.72. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.72 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the N.W. of boys and girls.

Testing of Hypothesis C.4.b

Hypothesis C.4.b in the null form states that there is no significant difference in the N.W. (1st U.T.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of N.W. (1st U.t.) boys and girls.

TABLE 5.61

MEANS AND SDs. OF N.W. (AT 1ST U.T.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	57.72	23.23			
				2.87	0.70	N.S.
Girls	109	59.73	24.55			

The value of 't' for the difference of Means of N.W. (1st U.t.) of the boys and girls is found to be 0.70. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.70 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the N.W. (1st U.T.) of boys and girls.

Testing of hypothesis C.4.c

Hypothesis C.4.c in the null form states that there is no significant difference in the N.W. (1st S.E.) of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of N.W. (1st S.E.) of boys and girls.

TABLE 5.62

MEANS AND SDs OF NEW (1ST S.E.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	65.09	24.26			
				2.90	0.49	N.S.
Girls	109	63.67	24.42			

The value of 't' for the difference of Means of N.W. (1st S.E.) of the boys and girls is found to be 0.49. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.49 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the N.W. (1st S.E.) of boys and girls.

Testing of hypothesis C.4.d

'Hypothesis C.4.d in the null form states that there is no significant difference in the N.W. (2nd U.T.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of N.W. (2nd U.T.) of boys and girls.

TABLE 5.63

MEANS AND SDs OF N.W. (2ND U.T.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	71.37	21.63			
				2.55	0.10	N.S.
Girls	109	71.09	21.26			

The value of 't' for the difference of Means of N.W. (2nd U.T.) of the boys and girls is found to be 0.10. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.10 therefore is not significant at both level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the N.W. (2nd U.T.) of boys and girls.

Testing of Hypothesis C.4.e

Hypothesis C.4.e. in the null form states that there is no significant difference in the N.W. (2nd S.E.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of N.W. (2nd S.E.) of boys and girls.

TABLE 5.64

MEANS AND SDs OF N.W. (2ND S.E.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	75.24	18.56			
				2.22	0.20	N.S.
Girls	109	75.69	18.77			

The value of 't' for the difference of Means of N.W. (2nd S.E.) of the boys and girls is found to be 0.20. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.20 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the N.W. (2nd S.E.) of boys and girls.

TABLE 5.65

MEANS & SDs OF N.W. AT DIFFERENT TESTS OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Level of Significance
N.W.Boys	199	60.21	23.26			
				2.72	0.72	N.S.
Girls	109	66.23	22.73			
At 1st Boys U.T.	199	57.72	23.23			
				2.87	0.70	N.S.
Girls	109	59.73	24.55			
At 1st Boys S.E.	199	65.09	24.26			
				2.90	0.49	N.S.
Girls	109	63.67	24.42			
At 2nd Boys U.T.	199	71.37	21.63			
				2.55	0.10	N.S.
Girls	109	71.09	21.26			
At 2nd Boys S.E.	199	75.24	18.56			
				2.22	0.20	N.S.
Girls	109	75.69	18.77			

Conclusions and Discussions

From the analysis it may be surmised that gender does not seem to influence the N.W.S. Significant difference has not emerged in the Means and SDs of both boys and girls. The Means when observed, the boys have scored more than girls on the whole though by the end of the year the means are almost the same.

TESTING OF HYPOTHESIS OF GENDER DIFFERENCES IN G.K.

Testing of Hypothesis C.5.a

Hypothesis C.5.a. in the null form states that there is no significant difference in the G.K. of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of G.K. of boys and girls.

TABLE 5.66

MEANS AND SDs OF G.K. OF BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig.
Boys	197	63.55	21.82			
				2.56	0.13	N.S.
Girls	109	63.20	21.31			

The value of 't' for the difference of Means of G.K. of the boys and girls is found to be 0.13. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.13 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the G.K. of boys and girls.

Testing of Hypothesis C.5.b

Hypothesis C.5.b. in the null form states that there is no significant difference in the G.K. (1st U.T.) of Boys and Girls. The critical ratio technique is applied to test the significance of difference of means of G.K. (1st U.T.) boys and girls.

TABLE 5.67

MEANs AND SDs OF G.K. (1ST U.T.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig
Boys	199	54.95	22.85			
				2.64	0.66	N.S.
Girls	109	56.69	21.84			

The value of 't' for the difference of Means of G.K. of the boys and girls is found to be 0.66. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.66, therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the G.K. (1st U.T.) of boys and girls.

Testing of Hypothesis C.5.c.

Hypothesis C.5.c in the null form states that there is no significant difference in the G.K. (1st S.E.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of G.K. (1st S.E.) of boys and girls.

TABLE 5.68

MEANS AND SDs OF G.K. (1ST S.E.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig.
Boys	199	58.41	21.11			
				2.53	0.007	N.S.
Girls	109	58.43	21.38			

The value of 't' for the difference of Means of G.K. (1st S.E.) of the boys and girls is found to be 0.007. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.007 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the G.K. (1st S.E.) of boys and girls.

Testing of Hypothesis C.5.d

Hypothesis C.5.d. in the null form states that there is no significant difference in the G.K. (2nd U.T.) of boys and girls. The critical ratio technique is applied to test the significance of difference of means of G.K. (2nd U.T.) of boys and girls.

TABLE 5.69

MEANS AND SDs OF G.K. (2ND U.T.) OF

BOYS AND GIRLS.

Group	Number	Means	SD	SED	t	Sig.
Boys	199	66.15	20.37			
				2.47	1.14	N.S.
Girls	109	68.99	21.08			

The value of 't' for the difference of Means of G.K. (2nd U.T.) of the boys and girls is found to be 1.14. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 1.14 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the G.K. (2nd U.T.) of boys and girls.

Testing of hypothesis C.5.e

Hypothesis C.5.e. in the null form states that there is no significant difference in the G.K. (2nd S.E.) of Boys and girls. The critical ratio technique is applied to test the significance of difference of means of G.K. (2nd S.E.) of boys and girls.

TABLE 5.70

MEANs AND SDs OF G.K. (2ND S.E.) OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Sig.
Boys	199	71.32	17.92			
				2.19	0.58	N.S.
Girls	109	72.57	18.64			

The value of 't' for the difference of Means of G.K. (2nd S.E.) of the boys and girls is found to be 0.58. The critical values of 't' are 1.97 and 2.59 at .05 and .01 levels. The obtained value of 't' 0.58 therefore is not significant at any level. This result supports the hypothesis of no difference. Hence the null hypothesis is accepted.

There is no significant difference in the G.K. (2nd S.E.) of boys and girls.

TABLE 5.71

MEANS & SDs OF G.K. AT DIFFERENT TESTS OF

BOYS AND GIRLS

Group	Number	Means	SD	SED	t	Level of Significance
G.K. Boys	199	63.55	21.82			
Girls	109	63.20	21.31	2.56	0.13	N.S.
At 1st Boys U.T.	199	54.95	22.85			
Girls	109	56.69	21.84	2.64	0.66	N.S.
At 1st Boys S.E.	199	58.41	21.11			
Girls	109	58.43	21.38	2.53	0.007	N.S.
At 2nd Boys U.T.	199	66.15	20.37			
Girls	109	68.99	21.08	2.47	1.14	N.S.
At 2nd Boys S.E.	199	71.52	17.92			
Girls	109	72.57	18.64	2.19	0.58	N.S.

Conclusions and Discussions

The conclusion that emerges from the above analysis is that sex of the child does not seem to affect the G.K. Scores. No significant difference has emerged in the G.K.S. of boys and girls. On the whole when observed the means are almost the same though by the end of the year at 2nd S.E. the girls score over the boys.

General Conclusions.

It may be surmised from all these findings that there are no gender differences in S.R. and A.A. When each of the components of S.R. and A.A. are taken individually the results seem to confirm the same. However, considering the means of S.R. the boys seem to score slightly more than the girls and in the A.A., the means of girls are edging over those of the boys.

D Group of Hypotheses

Hypothesis D1 - D5

This Group of Hypotheses deal with the differential distribution of S.R amongst the different age groups.

The differences in the Means of S.R. for the four categories namely:

3 yrs. to 3.3 yrs.

3.4 to 3.6 yrs.

3.7 to 3.9 yrs.

3.10 to 4 yrs.

are tested using ANOVA and the significance found at .05 level or at 0.01 level.

HYPOTHESIS OF DIFFERENCE IN S.R. ON THE BASIS OF AGE

Testing of Hypothesis D.1

Hypothesis D.1 in the null form states that there is no significant difference in the S.R. of Pre-School children of different age groups. The difference among the means of S.R. of children with different levels of age are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different age groups. As the size of the sample of the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each of the 4 groups for the purpose of computing Anova.

TABLE 5.72

SUMS OF SQUARES & MEANs VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	420.28	140.09	
				0.30
Within Conditions	36	16693.70	463.71	

The value of F which is 0.30 is not significant (significance for F at 0.05 = 2.86 and .01 = 4.38 for df 3, 36).The obtained evidence supports the null hypothesis of no significant difference among means of S .R. Hence the hypothesis is accepted. There is no significant difference in the S.R. of children from different age groups.

Testing of hypothesis D.2

Hypothesis D.2 in the null form states that there is no significant difference in the M.S. of pre-School children from different age groups. The difference among the means of children with different levels of M.S. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the M.S. of children was on the basis of different age groups. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.73

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	16.28	5.43	
Within Conditions	36	1899.10	52.75	0.10

The value of F which is 0.10 is not significant (significance for F at 0.05 = 2.86 and .01 = 4.38 for df 3, 36). The obtained evidence supports the null hypothesis of no significant difference among means of M.S.. Hence the hypothesis is accepted. There is no significant difference in the M.S. of children from different age groups.

Testing of Hypothesis D.3

The null hypothesis D.3 states that there is no significant difference in the C.S. of Pre-school children from different age groups. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of C.S. obtained by children have been classified on the basis of different age groups of

P.S.C. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.74

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	47.00	15.67	
				0.42
Within Conditions	36	1356.60	37.68	

The F value for the difference among means of C.S. of different age groups is 0.42 which is significant (significance of F at .05 = 2.86 and at .01 = 4.38 for df 3 & 36). Therefore the null hypothesis of no significant difference among means stands tenable. There is no significant difference among the different age groups in their C.S.

Testing of Hypothesis D.4

Hypothesis D.4. in the null form states that there is no significant difference in the P.S. of Pre-school

children from different age groups. The difference among the means of children with different levels of P.S. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the P.S. of children was on the basis of different age group. As the size of the sample of the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.75

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	123.20	41.07	
				1.05
Within Conditions	36	1408.40	39.12	

The value of F which is 1.05 is not significant (significance for F at .05 = 2.85 and .01 = 4.38 for df 3, 36). The obtained evidence supports the null hypothesis of no significant difference among means of P.S.. Hence the hypothesis is accepted. There is no significant difference in the P.S. of children from different age groups.

Testing of Hypothesis D.5.

The null hypothesis D.5. states that there is no significant difference in the C.E.L. of pre-school children from different age groups. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of C.E.L. obtained by children were classified on the basis of different age groups of P.S.C. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.76

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	2.68	0.89	
				0.19
Within Conditions	36	169.10	4.70	

The F value for the difference among means of C.E.L. of different age groups is 0.19 which is not significant (significance of F at .05 = 2.86 and at .01 =

4.38 for df 3 & 36). Therefore the null hypothesis of no significant difference among means stands tenable. There is no significant difference among the different age groups in their C.E.L..

Conclusions and Discussions

As regards the S.R. of the child, the findings of the study lead to the conclusion that the age of the child does not influence the S.R. But, considering the means it seems to slightly increase with the advancement of age. This may perhaps then mean that other factors seem to be more important, like the S.E.S., H.B. etc., than the age of the child.

E Group of Hypotheses

Testing of Hypothesis E.1

Hypothesis E.1. in the null form states that there is no significant difference in the O.A. of Preschool children with different levels of S.R. The difference among the means of O.A. of children with different levels of S.R. is tested for significance using the ANOVA.

The criterion used for classifying the scores of

the O.A. of children was on the basis of different levels of S.R. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.77

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1959.20	979.60	
				11.27
Within Conditions	27	2347.60	86.95	

The value of F which is 11.27 is significant (significance for F at 0.05 level = 3.35 and .01 level = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of O.A. Hence the hypothesis is rejected. There is a significant difference in the O.A. of children with different levels of S.R.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.78

MEANS & SDs OF O.A. OF CHILDREN WITH

DIFFERENT LEVELS OF S.R.

Group	M	SD	SED	t	Level of Significance
High S.R.	71.4	6.95			
			3.74	3.27	Sig. at .01 level
Moderate S.R.	59.2	9.56			
High S.R.	71.4	6.95			
			4.41	4.45	Sig. at .01 level
Low S.R.	51.8	12.09			
Moderate S.R.	59.2	9.56			
			4.87	1.52	Not Sig.
Low S.R.	51.8	12.09			

Significance at .05 level 2.04, at .01 level
for df 2, 27

The 't' value for the difference between means of O.A. of High and Moderate groups is 3.27 which is significant.

The 't' value for the difference between High and Low groups in their O.A. is 4.45. This value of 't' is significant.

The 't' values for difference in means of O.A. for Moderate and Low levels is 1.52 which is not significant.

Testing hypothesis E.2

The null hypothesis E.2 states that there is no significant difference in the O.A. of Preschool children with

different levels of M.S. The technique used to test the hypothesis is the one way classification of analysis of variances (ANOVA)

The scores of M.S. obtained by children at different levels were used as criterion to classify the O.A. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.79

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1976.87	988.43	
				7.27
Within Conditions	27	3670.50	135.94	.

The F value for the difference among means of O.A. of High, Moderate and Low Groups is 7.27 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2 & 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low groups in their O.A.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.80

MEANs & SDs OF O.A. OF CHILDREN WITH

DIFFERENT LEVELS OF M.S.

Group	M	SD	SED	t	Level of Significance
High M.S	68.0	12.14			
			5.44	2.72	Sig. at .05 level
Moderate M.S.	53.2	12.18			
High M.S.	68.0	12.14			
			5.59	3.38	Sig. at .01 level
Low M.S.	49.1	12.85			
Moderate M.S.	53.2	12.18			
			5.60	0.73	Not Sig.
Low M.S.	49.1	12.85			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of O.A. of High and Moderate groups is 2.72 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their O.A. is 3.38. This value of 't' is significant at .01 level.

The 't' value for difference in means of O.A. for Moderate and Low levels is 0.73 which is not significant.

Testing Hypothesis E.3

The null hypothesis E.3 states that there is no significant difference in the O.A. of Preschool children with different levels of C.S. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The scores of C.S. obtained by children at different levels were used as criterion to classify the O.A. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.81

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1694.60	847.30	
				6.97
Within Conditions	27	3282.10	121.58	

The F value for the difference among means of O.A. of High, Moderate and Low Groups is 6.97 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2, 27). Therefore the null hypothesis of

no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low Groups in their O.A.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.82

MEANs & SDs OF O.A. OF CHILDREN WITH

DIFFERENT LEVELS OF C.S.

Group	M	SD	SED	t	Level of Significance
High C.S.	71.3	8.74			
			4.20	3.26	Sig. at .01 level
Moderate C.S.	57.6	9.99			
High C.S.	71.3	8.74			
			4.37	4.01	Sig. at .01 level
Low C.S.	53.8	10.69			
Moderate C.S.	57.8	9.99			
			4.63	0.82	Not Sig.
Low C.S.	53.8	10.69			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of O.A. of High and Moderate groups is 3.26 which is significant.

The 't' value for the difference between High & Low groups in their O.A. is 4.01. This value of 't' is significant.

The 't' value for difference in means of O.A. for Moderate and Low levels is 0.82 which is not significant.

Testing Hypothesis E.4

The null hypothesis E.4 states that there is no significant difference in the O.A. of Preschool children with different levels of P.S. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The scores of P.S. obtained by children at different levels were used as criterion to classify the O.A. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.83

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2796.07	1398.03	
				7.78
Within Conditions	27	4853.40	179.76	

The F value for the difference among means of O.A. of High, Moderate and Low Groups is 7.78 which is significant (significance of F at.05 level = 3.35 and at .01 level = 5.49 for df 2, 27). Therefore the null hypothesis of

no significant difference among means does not stand tenable.
There is a significant difference among the High, Moderate
and Low groups in their O.A.

As the F ratio refutes the null hypothesis, the
't' test is applied to find out which of the difference is
significant.

TABLE. 5.84

MEANS & SDs OF O.A. OF CHILDREN WITH

DIFFERENT LEVELS OF P.S.

Group	M	SD	SED	t	Level of Significance
High P.S.	73.7	6.69	5.24	2.50	Sig. at .05 level
Moderate P.S.	60.6	15.15			
High P.S.	73.7	6.69	6.20	3.81	Sig. at .01 level
Low P.S.	50.1	18.43			
Moderate P.S.	60.6	15.15	7.54	1.39	Not Sig.
Low P.S.	50.1	18.43			

Significance at .05 level = 2.04, at .01 level =
2.77 for df 2, 27.

The 't' value for the difference between means of O.A. of
High and Moderate groups is 2.50 which is significant at .05.
The 't' value for the difference between High and Low groups
in their O.A. is 3.81 This value of 't' is significant.
The 't' value for difference in means of O.A. for Moderate
and low levels is 1.39 which is not significant.

Testing Hypothesis E.5

The null hypothesis E.5. states that there is no significant difference in the O.A. of Preschool children with different levels of C.E.L.. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The scores of C.E.L. obtained by children at different levels were used as criterion to classify the O.A. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.85

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1688.47	844.23	
Within Conditions	27	3490.20	129.27	6.53

The F value for the difference among means for O.A. of High, Moderate and Low Groups is 6.53 which is significant (significance of F at .05 level = 3.35 and at .01 level = 5.49 for df 2 & 27). Therefore the null hypothesis of no significant difference among means does not stand

tenable. There is a significant difference among the High, Moderate and Low Groups in their O.A.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.86

MEANs & SDs OF O.A. OF CHILDREN WITH

DIFFERENT LEVELS OF C.E.L.

Group	M	SD	SED	t	Level of Significance
High C.E.L.	72.8	7.33			
			4.45	1.42	Not Sig.
Moderate C.E.L.	66.5	12.01			
High C.E.L.	72.8	7.33			
			5.81	3.12	Sig. at .01 level
Low C.E.L.	54.7	16.84			
Moderate C.E.L.	66.5	12.01			
			6.54	1.80	Not Sig.
Low C.E.L.	54.7	16.84			

Significance at .05 level = 2.04, at .01 level = 2.77 for df 2, 27.

The 't' value for the difference between means of O.A. of High and Moderate groups is 1.42 which is not significant at any level.

The 't' value for the difference between High and Low groups in their O.A. is 3.12. This value of 't' is significant.

The 't' value for difference in means of O.A. for Moderate and Low levels is 1.80 which is not significant.

Conclusions and Discussions

The analysis of O.A. scores reveal some interesting results. Children score high in other activities too if they have scored high in S.R. There seems to be a significant difference in the O.A. scores of children from different levels of S.R.

This is because the stimulation available to the child for development of S.R. also encourages his abilities in other activities (O.A.). The varied opportunities and conducive environment in the form of better Home Background and favourable Parental Involvement in the child's rearing strengthens his abilities not only in the readiness aspects associated with school requirements but also his general capacities in his drawing, craft, creative work etc., which constitute O.A. (Other Activities).

E Group of Hypotheses

Hypotheses E1 - E5.

The various characteristics of children were rated by the teachers on a proforma. This "Teacher Rating" (T.R.) was on Self Attributes (S.A.) like Personal Data (P.D.), Mental Abilities (M.A.), Social Skills(S.S) and Personality Traits (P.T.). Their "Knowledge of English"

(k.E.) was also rated. These ratings were taken up to find out whether there is any significant relationship between S.R. and each of these aspects as rated by the teacher.

The hypothesis of relationship between S.R. and T.R on S.A. for P.S.C. are put together to form this group. The relationship between S.R. and various components of S.A. are tested.

The inter relationship among the two are obtained from the correlation of coefficient which are presented in the corresponding tables. The critical values of r at .01 level for the corresponding degrees of freedom is used to compare the obtained r and the significance is determined.

TESTING OF HYPOTHESIS OF RELATIONSHIP BETWEEN S.R. & T.R.

Testing Hypothesis F.1

The null hypothesis F.1 states that there is no significant relationship between S.R. and T.R. on S.A. of Preschool children. The technique used in testing this hypothesis is the Product moment coefficient of correlation. The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and the 'y' variable represents the class interval scores of T.R. on S.A. of P.S.C.

TABLE 5.87

SIGNIFICANCE OF 'r' FOR S.R. AND T.R. ON S.A.

Sample Size	df	r	Level of Significance
308	306	0.26	.01 level

From the correlation coefficient presented in Table 5.87 the coefficient of correlation between S.R. and T.R. on S.A. is read as 0.26. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant positive but low relationship between S.R. and T.R. on S.A. of Preschool children.

Testing of Hypothesis F.2

The hypothesis F.2 states that there is no significant relationship between S.R. and T.R. on M.A. of Preschool children. The null hypothesis was tested using the product moment coefficient of correlation technique. A scattergram was drawn to compute the 'r' where in the class interval scores of S.R. of P.S.C. is represented in the 'x'

variable and the class interval scores of T.R. on M.A. of P.S.C. is represented in the 'y' variable.

TABLE 5.88

SIGNIFICANCE OF 'r' FOR S.R. & T.R. ON M.A.

Sample Size	df	r	Level of Significance
308	306	0.27	At .01 level

As can be observed from the correlation coefficient presented in Table 5.88 the coefficient of correlation between S.R. and T.R. on M.A. is read as 0.27. The critical values of 'r' for significance at .01 level is .148 for degrees of freedom 306.

There is a significant positive but low relationship between S.R. and T.R. on M.A. of Preschool children.

Testing of Hypothesis F.3

The null hypothesis F.3 states that there is no significant relationship between S.R. and T.R. on P.D. of Preschool children. The technique used in testing this hypothesis is the Product moment coefficient of correlation. The 'r was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and the

'y' variable represents the class interval scores of T.R. on

P.D. of P.S.C..

TABLE 5.89

SIGNIFICANCE OF 'r' FOR S.R. & T.R. ON P.D.

Sample Size	df	r	Level of Significance
308	306	0.19	.01 level

From the correlation coefficient presented in

Table 5.89 the coefficient of correlation between S.R. and

T.R. on P.D. is read as 0.19. This value of 'r' is

significant at the .01 level as the critical value for

significance of 'r' at .01 level is .148 for degrees of

freedom 306. Therefore the null hypothesis of no

relationship is rejected as the evidence is not supportive.

There is a significant, positive but negligible

relationship between S.R. and T.R. on P.D. of Preschool

children.

Testing of Hypothesis F.4

The hypothesis F.4 states that there is no

significant relationship between S.R. and T.R. on S.S. of

Preschool children. The null hypothesis was tested using the

Product moment coefficient of correlation technique. A

scattergram was drawn to compute the 'r' where in the class interval scores of S.R. of P.S.C. is represented in the 'x' variable and the class interval scores of T.R. on S.S. of P.S.C. is represented in the 'y' variable.

TABLE 5.90

SIGNIFICANCE OF 'r' FOR S.R. & T.R. ON S.S.

Sample Size	df	'r'	Level of Significance
308	306	0.23	At .01 level

As can be observed from the correlation coefficient presented in Table 5.90 the coefficient of correlation between S.R. and T.R. on S.S. is read as 0.23. The critical value of 'r' for significance at .01 level is .148 for degrees of freedom 306.

There is a significant positive but low relationship between S.R. and T.R. on S.S. of Preschool children.

Testing of Hypothesis F.5

The null hypothesis F.5 states that there is no significant relationship between S.R. and T.R. on P.T. of Preschool children. The technique used in testing this hypothesis is the Product moment coefficient of correlation.

The 'r' was computed by drawing a scattergram in which the 'x' variable represents the class interval scores of S.R. and 'y' variable represents the class interval scores of T.R. on P.T. of P.S.C..

TABLE 5.91

SIGNIFICANCE OF 'r' FOR S.R. & T.R. ON P.T.

Sample Size	df	'r'	Level of Significance
308	306	0.21	.01 level

From the correlation coefficient presented in Table 5.91 the coefficient of correlation between S.R. and T.R. on P.T. is read as 0.21. This value of 'r' is significant at the .01 level as the critical value for significance of 'r' at .01 level is .148 for degrees of freedom 306. Therefore the null hypothesis of no relationship is rejected as the evidence is not supportive.

There is a significant positive but low relationship between S.R. and T.R. on P.T. of Preschool children.

Testing of Hypothesis F.6

The hypothesis F.6 states that there is no significant relationship between S.R. and T.R. on K.E. of

Preschool children. The null hypothesis was tested using the Product moment coefficient of correlation technique. A scattergram was drawn to compute the `r` where in the class interval scores of S.R. of P.S.C. is represented in the `x` variable and the class interval scores of T.R. on K.E. of P.S.C. is represented in the `y` variable.

TABLE 5.92

SIGNIFICANCE OF `r` FOR S.R. & T.R. ON K.E.

Sample Size	df	`r`	Level of Significance
308	306	0.32	.01 level

As can be observed from the correlation coefficient presented in Table 5.92 the coefficient of correlation between S.R. and T.R. on K.E. is read as 0.32. The critical value of `r` for significance at .01 level is .148 for degrees of freedom 306. The obtained `r` denotes positive but low relationship i.e. the more the scores in S.R., the higher are likely to be the scores in K.E. This result does not support the hypothesis of no relationship. So the null hypothesis is rejected.

There is a significant positive but low relationship between S.R. and K.E. of Preschool children.

Conclusions and Discussions

It can be surmised from these analysis that there is a positive and significant correlation between S.R. and T.R. on S.A. The same has been seen in the components of S.A. too. Children with high S.R. tend to have high scores in S.A. This may be because the high S.R. in itself helps the child to build up attributes which are favourable. The highest correlation is between M.A. and S.R. and least is between P.D. and S.R.. This follows in line with our earlier findings where A.A. and C.S. are highly correlated and the correlation is low with A.A. and M.S.

G Group of Hypotheses

Hypothesis of G.1 - G.5

TESTING OF HYPOTHESIS OF DIFFERENCE IN S.R. ON THE BASIS OF HOME BACKGROUND (H.B.)

The admission form for admission into the school was used for collecting information on H.B. The following aspects were taken from it:

Parents' Education

Parents' Occupation

Economic Status

Number of Siblings

Residential Area

This group of null hypothesis deals with the differential distribution of means of S.R. scores for the various categories of Home Background. The differences in means of S.R. scores are tested by using Analysis of Variance. The significance is determined by comparison with the respective critical values.

Testing Hypothesis G.1.a

Hypothesis G.1.a in the null form states that there is no significant difference in the S.R. of Pre-school children with different levels of Parents Education. The difference among the means of S.R. of children with different levels of E.P. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of P.E. As the size of the sample of the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

● TABLE 5.9.5

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	3747.80	1873.90	
				16.45
Within Conditions	27	3076.50	113.94	

The value of F which is 16.45 is significant (significance for F at 0.05 = 3.35 and .01 = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. There is a significant difference in the S.R. of children with different levels of Parents' Education (P.E.).

As F has emerged significant it is necessary to treat the data to further process of testing. So the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.94

<u>Means & SDs of S.R. OF CHILDREN WITH</u>

<u>DIFFERENT LEVELS OF P.E.</u>

Group	M	SD	SED	t	Level of Significance
High on P.E.	65.8	9.02			
			5.15	3.17	S
Moderate on P.E.	49.5	13.56			
High on P.E.	65.8	9.02			
			6.20	4.39	S
Low on P.E.	38.6	17.40			
Moderate on P.E.	49.5	13.56			
			6.98	1.56	N.S.
Low on P.E.	38.6	17.40			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df ., 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 3.17 which is significant at .01 level.

The 't' value for the difference between High and Low groups in their S.R. is 4.39. This value of 't' is also significant.

The 't' value for difference in means of S.R. for Moderate and low levels is 1.56 which is not significant.

Testing of Hypothesis G.1.b

The null hypothesis G.1.b. states that there is no significant difference in the S.R. of Preschool children with different levels of Mothers Education. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA).

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of M.E. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.95

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	5940.87	2970.43	
				31.57
Within Conditions	27	2540.60	94.10	

The F value for the difference among means of S.R. of High, Moderate and Low groups is 31.57 which is significant (significance of F at .05 =3.35 and at .01 =5.49 for df 2 & 27). Therefore the null hypothesis of no significant difference among means does not stand tenable.

There is a significant difference among the High, Moderate and Low Groups in their S.R.

As the F ratio refutes the null hypothesis the 't' test is applied to find out which of the differences is significant.

TABLE 5.96

MEANS & SDs OF S.R. OF CHILDREN WITH

DIFFERENT LEVELS OF M.E.

Group	M	SD	SED	t	Level of Significance
High M.E.	71.7	7.20			
			4.66	4.10	S
Moderate M.E.	52.6	12.86			
High M.E.	71.7	7.20			
			6.72	5.12	S
Low M.E.	37.3	19.99			
Moderate M.E.	52.6	12.86			
			7.52	2.04	S at .05
Low M.E.	37.3	19.99			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 4.10 which is significant.

The 't' value for the difference between High and Low groups in their S.R. is 5.12. This value of 't' is significant.

The 't' value for difference in means of S.R. for Moderate and Low levels is 2.04 which is significant at .05 level.

Testing of Hypothesis 6.1.c.

Hypothesis 6.1.c. in the null form states that there is no significant difference in the S.R. of Preschool children with different levels of Fathers' Education. The difference among the means of S.R. of children with different levels of F.E. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of F.E. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.97

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1743.27	871.63	
Within Conditions	27	2704.60	100.17	8.70

The value of F which is 8.70 is significant (significance for F at .05 = 3.35 and .01 = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R.

Hence the hypothesis is rejected. There is a significant difference in the S.R. of children with different levels of F.E.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.98

MEANs & SDs OF S.R. OF CHILDREN WITH
DIFFERENT LEVELS OF F.E.

Group	M	SD	SED	t	Level of Significance
High F.E.	59.7	10.53			
			5.04	2.64	S at .05
Moderate F.E.	46.4	11.97			
High F.E.	59.7	10.53			
			5.25	3.43	S
Low F.E.	41.7	12.86			
Moderate F.E.	46.4	11.97			
			5.55	0.85	N.S.
Low F.E.	41.7	12.86			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 2.64 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their S.R. is 3.43. This value of 't' is significant. The 't' value for difference in means of S.R. for Moderate and Low levels is 0.85 which is not significant.

Testing of Hypothesis G.2.a.

Testing of Hypothesis G.2.a. states that there is no significant difference in the S.R. of Preschool children with different levels of Mothers Occupation. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of M.O. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.99

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	1947.80	973.90	
				9.59
Within Conditions	27	2743.00	101.59	

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 2.69 which is significant.

The 't' value for the difference between High and Low groups in their S.R. is 4.01. This value of 't' is significant at .01 level.

The 't' value for difference in means of S.R. for Moderate and Low levels is 1.43 which is not significant at any level.

Testing of Hypothesis G.2.b.

Hypothesis G.2.b in the null form states that there is no significant difference in the S.R. of Preschool children with different levels of Fathers' Occupation. The difference among the means of S.R. of children with different levels of F.O. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of F.O. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.101

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	4	128302	32076	
				12.52
Within Conditions	45	115256	2561	

The value of F which is 12.52 is significant (significance for F at 0.05 = 3.35 and .01 = 5.49 for df 4, 45). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. There is a significant difference in the S.R. of children with different levels of Fathers Occupation.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.102

<u>MEANs</u> <u>AND</u> <u>SDs</u> <u>OF</u> <u>S.R.</u> <u>OF</u> <u>CHILDREN</u> <u>WITH</u>

<u>DIFFERENT</u> <u>LEVELS</u> <u>OF</u> <u>F.O.</u>

Occupation	Group	M	SD	SED	t	Level of Significance
Professional	1	75.5	11.83	5.13	3.90	Sig. at .01
Manager	2	55.6	14.11			
Professional	1	75.5	11.83	4.20	7.38	Sig. at .01
Business	3	45.4	6.03			
Professional	1	75.5	11.83	4.71	7.43	Sig. at .01
Labourer	4	41.4	9.06			
Professional	1	75.5	11.83	4.71	7.64	Sig. at .01
Clerical	5	39.6	7.09			
Manager	2	55.6	14.11	4.00	2.75	Sig. at .01
Business	3	45.4	6.03			
Manager	2	55.6	14.11	4.53	3.31	Sig. at .01
Labourer	4	41.4	9.06			
Manager	2	55.6	14.11	4.17	3.84	Sig. at .01
Clerical	5	39.6	7.09			
Business	3	45.4	6.03	3.44	1.16	N.S.
Labourer	4	41.4	9.06			
Business	3	45.4	6.03	2.94	1.70	N.S.
Clerical	5	39.6	7.09			
Labourers	4	41.4	9.06	3.64	0.28	N.S.
Clerical	5	39.6	7.09			

Significance of 't' at .05 = 2.02, .01 = 2.69

for df 4, 45.

The 't' value for the difference between means of S.R. of Group 1 and 2 is 3.90 which is significant.

The 't' value for the difference between Group 1 and 3 in their S.R. is 7.38. This value of 't' is significant.

The 't' value for difference in means of S.R. for groups 1 and 4 is 7.43 which is significant.

The 't' value for the difference between groups 1 and 5 in their S.R. is 7.64 which is significant.

Between group 2 and 3 the 't' value for the difference in S.R. is 2.75. This value of 't' is significant too.

For the differences between groups 2 and 4 in their S.R. the 't' value is 3.51 which is also significant.

Between groups 2 and 5 the 't' value for difference in S.R. is 3.84. This value of 't' is significant.

For the difference between groups 3 and 4 in their S.R. the 't' value is 1.16 which is not significant.

Between groups 3 and 5 the 't' value for the difference in S.R. is 1.70. This value of 't' is also not significant.

For the difference between groups 4 and 5 in their S.R. the 't' value is 0.28 which is not significant.

Testing of Hypothesis G.3

The null hypothesis G.3 states that there is no significant difference in the S.R. of Preschool children with different levels of Economic status. The technique used to test the hypothesis is the one way classification of analysis of variance (ANOVA).

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of E.S. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.103

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	4713.07	1571.02	
				20.49
Within Conditions	36	2760.70	76.69	

The F value for the difference among means of S.R. of High, Moderate and Low groups is 20.49 which is significant. (Significance of F at 0.05 = 2.86 and at .01 = 4.38 for df 3, 36). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low Groups in their S.R.

As the F ratio refutes the null hypothesis the 't' test is applied to find out which of the differences is significant.

TABLE 5.104

MEANs AND SDs OF S.R. OF CHILDREN WITH

DIFFERENT LEVELS OF E.S.

Group	Gr.	M	SD	SED	t	Level of Significance
Upto 1000	1	35.7	10.24			
				3.83	0.16	N.S.
1001 - 3000	2	36.3	6.50			
1001 - 3000	1	35.7	10.24			
				4.64	3.88	S
3001 - 5000	3	53.7	10.53			
3001 - 5000	1	35.7	10.24			
				3.51	7.10	S
5001 and above	4	60.6	4.27			
1001 - 3000	2	36.3	6.50			
				3.91	4.45	S
3001 - 5000	3	53.7	10.53			
1001 - 3000	2	36.3	6.50			
				2.46	9.88	S
3001 - 5000	4	60.6	4.27			
1001 - 3000	3	53.7	10.53			
				3.59	1.92	N.S.
5001 and above	4	60.6	4.27			

Significance of 't' at .05 = 2.02, .01 = 2.71 for df 3, 36.

The 't' value for the difference between means of S.R. of Groups 1 and 2 is 0.16 which is not significant.

The 't' value for the difference between Group 1 and 3 in

their S.R. is 3.86. this value of 't' is significant.

The 't' value for difference in means of S.R. for Groups 1 and 4 is 7.10 which is significant.

The 't' value for the difference between groups 2 and 3 in their S.r. is 4.45. This value of 't' is significant.

The 't' value for difference in means of S.R. for Group 2 and 4 is 9.06. This value of 't' is also significant.

The 't' value for the difference between groups 3 and 4 is 1.92. This value is not significant.

Testing of Hypothesis G.4

Hypothesis G.4 in the null form states that there is no significant difference in the S.R. of Preschool children and Number of Siblings. The difference among the means of S.R. of children with different levels of N.S., are tested for significance using the ANOVA.

The criterion for classifying the scores of the S.R. of children was on the basis of N.S. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.105

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	2725.88	908.63	
				6.84
Within Conditions	36	4780.50	132.79	

The value of F which is 6.84 is significant (significance for F at .05 = 2.86 and .01 = 4.38 for df 3, 36). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. There is a significant difference in the S.R. of children.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.106

MEANs & SDs OF S.R. OF CHILDREN AND N.S.

Number of Siblings	Gr.	M	SD	SED	t	Level of Significance
3 and above	1	35.7	12.12	4.50	1.13	N.S.
1-2 siblings	2	40.8	7.48			
3 and above	1	35.7	12.12	5.24	3.04	S
1 sibling	3	51.7	11.30			
3 and above	1	35.7	12.12	5.43	3.81	S
Nil	4	56.4	12.15			
1-2 siblings	2	40.8	7.48	4.28	2.52	S
1 sibling	3	51.7	11.30			
1-2 siblings	2	40.8	7.48	4.51	3.46	S
Nil	4	56.4	12.15			
1 sibling	3	51.7	11.30	5.25	0.91	N.S.
Nil	4	56.4	12.15			

Significance of 't' at .05 = 2.02, .01 = 2.71 for df 3, 36.

The 't' value for the difference between means of S.R. of Groups 1 and 2 is 1.13 which is not significant.

The 't' value for the difference between Group 1 and 3 in their S.R. is 3.04. this value of 't' is significant.

The 't' value for difference in means of S.R. for groups 1 and 4 is 3.81 which is significant.

The 't' value for the difference between Group 2 and 3 in their S.R. is 2.52. This value of 't' is significant.

The 't' value for difference in means of S.R. for groups 2 and 4 is 3.46 which is significant.

The 't' value for the difference in groups 3 and 4 in their S.R. is 0.91 which is not significant at any level.

Testing of Hypothesis G.5

The null hypothesis G.5 states that there is no significant difference in the S.R. of Preschool children from different Residential Areas. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA).

The different residential areas of children were used as criterion to classify the S.R. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.107

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	4830.50	1610.17	
Within Conditions	36	5525.00	153.47	10.49

˙ιe ι value for the difference among means of
S.R. of High, Moderate and Low Groups is 10.49 which is
significant (significance of F at .05 = 2.86 and at .01 =
4.38 for df 3, 56). Therefore the null hypothesis of no
significant difference among means does not stand tenable.
There is a significant difference among the High, Moderate
and Low groups in their S.R.

As the F ratio refutes the null hypothesis the
't' test is applied to find out which of the differences is
significant.

TABLE 5.108

MEANs AND SDs OF S.R. OF CHILDREN FROM

DIFFERENT R.A.

Group	Gr.	M	SD	SED	t	Level of Significance
Dharavi/ Labour Camp	1	27.8	10.10			
				5.84	4.12	S
CGS/Koliwada	2	51.9	15.48			
Dharavi/ Labour Camp	1	27.8	10.10			
				5.01	4.95	S
Matunga	3	52.6	12.22			
Dharavi/ Labour Camp	1	27.8	10.10			
				4.04	6.65	S
Sion	4	54.7	7.85			
CGS/Koliwada	2	51.9	15.48			
				6.24	0.11	N.S.
Matunga	3	52.6	12.22			

TABLE 5.108 - Contd.

Group	Gr.	M	SD	SED	t	Level of Significance
CGS/Koliwada	2	51.9	15.48	5.49	0.51	N.S.
Sion	4	54.7	7.85			
Matunga	3	52.6	12.22	4.59	0.46	N.S.
Sion	4	54.7	7.85			

Significance of 't' at .05 = 2.02, .01 = 2.71 for df 3, 36.

The 't' value for the difference between means of S.R. of Groups 1 and 2 is 4.12 which is significant.

The 't' value for the difference between Groups 1 and 3 in their S.R. is 4.95. This value of 't' is significant.

The 't' value for difference in means of S.R. for Groups 1 and 4 is 6.65 which is also significant.

The 't' value for the difference between Groups 2 and 3 in their S.R. is 0.11 which is not significant.

The 't' value for difference in means of S.R. for groups 2 and 4 is 0.51 which is also not significant.

The 't' value for the difference between groups 3 and 4 in their S.R. is 0.46 which is not significant too.

Conclusion

The results of the analysis enable us to conclude that H.B. is an important determinant for S.R. All

the different components of H.B. i.e. the Parents Education (P.E.), Mothers Education (M.E.), Fathers Education (F.E.), Mothers Occupation (M.O.), Fathers Occupation (F.O.), Economic status (E.S.), Number of siblings (N.S.) and the Residential Area (R.A.) are all associated with S.R. of P.S.C.

The higher the scores in H.B. obtained, higher is the S.R, lower the scores in H.B. lower is the S.R. The high scorers in S.R. significantly differ in their H.B. from the low S.R. scorers.

This goes to prove that a conducive H.B. and stimulating and nurturing environment help promote S.R. Children with high level of H.B. significantly differ in the S.R. from children with low levels of H.B. at .01 level. Between the High and Moderate levels of H.B. they differ significantly at .01 level but the Moderate and Low levels the difference is not significant.

TESTING OF HYPOTHESIS OF DIFFERENCE IN S.R. ON THE BASIS OF PARENTAL INVOLVEMENT

As discussed earlier in Chapter 1 an interview schedule was prepared to elicit more information on various aspects of 'Home Environment'. Parental Involvement included the following aspects and totalled to 180 scores. They are:

		Scores
Attitude to Child Rearing	(A.C.R.)	30
Actual Handling	(A.H.)	30
Expectations of Parents	(P.E.)	30
Inter-Personal relationship	(I.P.R.)	30
Facilities Provided and	(F.P.)	30
Preparation of the child	(P. C.)	30
Total		180

Testing of hypothesis H.1.a

Hypothesis H.1.a. in the null form states that there is no significant difference in the S.R. of Preschool children with different levels of P.I. The difference among the means of S.R. of children with different levels of P.I. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of P.I. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.109

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2293.07	1146.53	
				25.44
Within Conditions	27	1216.80	45.07	

The value of F which is 25.44 is significant (significance for F at 0.05 = 3.35 and .01 = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. there is a significant difference in the S.r. of children with different levels of P.I.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.110

MEANs AND SDs OF S.R. OF CHILDREN WITH
DIFFERENT LEVELS OF P.I.

Group	M	SD	SED	t	Level of Significance
High P.I.	72.0	5.44			
			2.93	3.89	Sig.
Moderate P.I.	60.6	7.50			
High P.I.	72.0	5.44			
			4.31	4.96	Sig
Low P.I.	50.6	12.50			
Moderate P.I.	60.6	7.50			
			4.61	2.17	Sig at .05 level
Low P.I.	50.6	12.50			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2,27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 3.89 which is significant at .01 level.

The 't' value for the difference between High and Low groups in their S.R. is 4.96. This value of 't' is significant.

The 't' value for difference in means of S.R. for Moderate and Low levels is 2.17 which is significant at .05 level.

Testing of Hypothesis H.1.b.

The null hypothesis H.1.b. states that there is no significant difference in the S.R. of Preschool children with different levels of A.C.R.. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA).

The scores of A.C.R. obtained by children at different levels were used as criterion to classify the S.R. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.111

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2250.20	1125.10	
				7.28
Within Conditions	27	4172.10	154.52	

The F value for the difference among means of S.R. of High, Moderate and Low Groups is 7.28 which is significant (significance of F at .05 = 3.35 and at .01 =5.49

for df 2, .'''. Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low Groups in their S.R.

As the F ratio refutes the null hypothesis the 't' test is applied to find out which of the differences is significant.

TABLE 5.112

MEANS AND SDs OF S.R. OF CHILDREN WITH

DIFFERENT LEVELS OF A.C.R..

Group	M	SD	SED	t	Level of Significance
High A.C.R.	72.8	10.04			
			5.05	2.69	Sig.at .05
Moderate A.C.R.	59.2	12.42			
High A.C.R.	72.8	10.04			
			5.55	3.76	Sig. at .01
Low A.C.R.	51.9	14.41			
Moderate A.C.R.	59.2	12.42			
			6.02	1.21	Not Sig.
Low	51.9	14.41			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 2.69 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their S.R. is 3.76. This value of 't' is significant.

The 't value for difference in means of S.R. for Moderate and Low levels is 1.21 which is not significant.

Testing of Hypothesis H.1.c.

Hypothesis H.1.c. in the null form states that there is no significant difference in the S.R. of Preschool children with different levels of A.H. The difference among the means of S.R. of children with different levels of A.H. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of A.H. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.113

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	3894.07	1947.03	
				10.25
Within Conditions	27	5130.90	190.03	

The value of F which is 10.25 is significant (significance for F at 0.05 = 3.35 and .01 = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. There is a significant difference in the S.R. of children with different levels of A.H.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.114

MEANs & SDs OF S.R. OF CHILDREN WITH

DIFFERENT LEVELS OF A.H.

Group	M	SD	SED	t	Level of Significance
High A.H.	78.1	9.29			
			4.76	3.05	Sig.
Moderate A.H.	63.6	11.84			
High A.H.	78.1	9.29			
			6.37	4.38	Sig.
Low A.H.	50.2	17.88			
Moderate A.H.	63.6	11.84			
			6.78	1.98	Not Sig.
Low A.H.	50.2	17.88			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 3.05 which is significant at both the levels.

The 't' value for the difference between High and Low groups in their S.R. is 4.38. This value of 't' is significant.

The 't' value for difference in means of S.R. for Moderate and Low levels is 1.98 which is not significant at any level.

Testing of Hypothesis H.1.d.

The null hypothesis H.1.d. states that there is no significant difference in the S.R. of Preschool children with different levels of E.P. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The scores of E.P. obtained by children at different levels were used as criterion to classify the S.R. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.115

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2814.47	1407.23	
				7.98
Within Conditions	27	4763.00	176.41	

The F value for the difference among means of S.R. of High, Moderate, and Low groups is 7.98 which is significant (significance of F at .05 = 3.35 and at .01 = 5.49 for df 2 & 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low Groups in their S.R.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.116

MEANS AND SDs OF S.R. OF CHILDREN WITH
DIFFERENT LEVELS OF E.P.

Group	M	SD	SED	t	Level of Significance
High E.P.	71.4	5.12			
Moderate E.P.	60.5	15.16	5.06	2.15	Sig. at .05
High E.P.	71.4	5.12			
Low E.P.	47.7	19.84	6.48	3.66	Sig
Moderate E.P.	60.5	15.16			
Low E.P.	47.7	19.84	7.90	1.62	Not Sig.

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 2.15 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their S.R. is 3.66. This value of 't' is significant at both levels.

The 't' value for difference in means of S.R. for Moderate and Low levels is 1.62 which is not significant.

Testing of Hypothesis H.1.e.

Hypothesis H.1.e. in the null form states that there is no significant difference in the S.R. of Preschool

children with different levels of I.P.R. The difference among the means of S.R. of children with different levels of I.P.R. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of I.P.R. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.117

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2960.07	1480.03	
				10.28
Within Conditions	27	3887.30	143.97	

The value of F which is significant (significance for F at .05 = 3.35 and 0.01 =5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. There is a significant difference in the S.R. of children with different levels of I.P.R..

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.118

MEANS AND SDs OF S.R., OF CHILDREN WITH DIFFERENT LEVELS OF I.P.R.

Group	M	SD	SED	t	Level of Significance
High I.P.R.	71.7	5.97			
			4.23	3.76	Sig.
Moderate I.P.R.	55.8	11.96			
High I.P.R.	71.7	5.97			
			4.93	4.85	Sig.
Low I.P.R.	47.8	14.39			
Moderate I.P.R.	55.8	11.96			
			5.92	1.35	Not Sig.
Low I.P.R.	47.8	14.39			

Significance of 't' at .05 = 2.04 , .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 3.76 which is significant.

The 't' value for the difference between High and Low groups in their S.R. is 4.85. This value of 't' is significant.

The 't' value for difference in means of S.R. for Moderate and Low levels is 1.35 which is not significant.

Testing of Hypothesis H.1.f.

The null hypothesis H.1.f. states that there is no significant difference in the S.R. of Preschool children with different levels of F.P. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA).

The scores of F.P. obtained by children at different levels were used as criterion to classify the S.R. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.119

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2625.00	1312.50	
Within Conditions	27	4413.70	163.47	8.03

The F value for the difference among means of S.R. of High, Moderate and Low Groups is 8.03 which is significant (significance of F at .05 = 3.35 and at .01 = 5.49 for df 2, 27). Therefore the null hypothesis of no

significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low groups in their S.R.

As the F ratio refutes the null hypothesis, the 't test is applied to find out which of the differences is significant.

TABLE 5.120

MEANs AND SDs OF S.R. OF CHILDREN WITH

DIFFERENT LEVELS OF F.P.

Group	M	SD	SED	t	Level of Significance
High F.P.	73.4	10.66			
			5.32	2.82	Sig.
Moderate F.P.	58.4	13.02			
High F.P.	73.4	10.66			
			5.83	3.86	Sig.
Low F.P.	50.9	15.03			
Moderate F.P.	58.4	13.02			
			6.29	1.19	Not Sig.
Low F.P.	50.9	15.03			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 2.82 which is significant.

The 't' value for the difference between High an Low groups in their S.R. is 3.86. This value of 't' is significant.

The 't' value for difference in means of S.R. for Moderate and low levels is 1.19 which is not significant.

Testing of Hypothesis H.1.g

Hypothesis H.1.g. in the null form states that there is no significant difference in the S.R. of Preschool children with different levels of P.C. The difference among the means of S.R. of children with different levels of P.C. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the S.R. of children was on the basis of different levels of P.C. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.121

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	2554.40	1277.20	
				8.17
Within Conditions	27	4222.30	156.38	

The value of F which is significant (significance for F at .05 = 3.35 and 0.01 = 5.49 for df 2, 27). The obtained evidence does not support the null

hypothesis of no significant difference among means of S.R. Hence the hypothesis is rejected. There is a significant difference in the S.R. of children with different levels of P.C.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.122

MEANS AND SDs OF S.R. OF CHILDREN WITH

DIFFERENT LEVELS OF P.C.

Group	M	SD	SED	t	Level of Significance
High P.C.	71.3	2.90			
			4.78	2.30	Sig. at .05
Moderate P.C.	60.3	14.83			
High P.C.	71.3	2.90			
			6.02	3.75	Sig.
Low P.C.	48.7	18.83			
Moderate P.C.	60.3	14.83			
			7.58	1.53	Not sig.
Low P.C.	48.7	18.83			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of S.R. of High and Moderate groups is 2.30 which is significant at .05 level.

The 't' value for the difference between High and Low groups in their S.R. is 3.75. This value of 't' is significant at .01 level.

The 't' value for difference in means of S.R. for Moderate and Low levels is 1.53 which is not significant.

Conclusions and Discussions:

Parental Involvement emerges as one of the significant factor influencing S.R. Children with high scores in S.R. seem to be with high P.I. and vice versa. In each of the component of P.I. too the same results can be observed. Children from high P.I category differ from low P.I. category significantly in their S.R. at .01 level in each of the component. Between the High and Moderate levels of P.I. the difference in S.R. is significant at .01 level in Actual Handling (A.H.). Inter personal relations (I.P.R.) and Facilities provided (F.P.) but Attitude to Child Rearing (A.C.R.), Parental Expectations (P.E.) and preparation of the Child (P.C.) the significance is at .05 level.

The results are not surprising considering the fact that 'Parental Involvement' will automatically nurture aspects necessary for S.R. and stimulate the cognitive faculties. Parental Involvement in the child in itself provides the conducive environment necessary for optimum development.

TESTING OF HYPOTHESIS OF DIFFERENCE IN A.A. ON THE BASIS OF P.I.

Testing Hypothesis I.1.a.

Hypothesis I.1.a. in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of P.I. The difference among the means of A.A. of children with different levels of P.I. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of P.I. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing Anova.

TABLE 5.123

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	25454.47	12727.23	16.78
Within Conditions	27	20479.70	758.51	

The value of F which is 16.78 is significant (significance for F at 0.05 = 3.35 and .01 = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of A.A. Hence the hypothesis is rejected. There is a significant difference in the A.A. of children with different levels of P.I.

As F has emerged significant it is necessary to treat the data to further process of testing. so, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.124

MEANs AND SDs OF A.A. OF CHILDREN WITH DIFFERENT LEVELS OF P.I.

Group	M	SD	SED	t	Level of Significance
High P.I.	244.2	24.72			
			11.40	5.12	Sig.
Moderate P.I.	185.8	26.23			
High P.I.	244.2	24.72			
			11.57	5.59	Sig.
Low P.I.	179.5	26.98			
Moderate P.I.	185.8	26.23			
			11.90	0.53	Not Sig.
Low P.I.	179.5	26.98			

Significance of 't' at .05 = 2.04, .01 = 2.77
for df 2, 27.

The 't' value for the difference between means of A.A. of
High and Moderate groups is 5.12 which is significant at .01
level.

The 't' value for the difference between High and Low groups
in their A.A. is 5.59. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate
and Low levels is .53 which is not significant at any level.

Testing of Hypothesis I.1.b.

The null hypothesis I.1.b. states that there is
no significant difference in the A.A. of Preschool children
with different levels of A.C.R.. The technique used to test
the hypothesis is the one way classification of analysis of
Variance (ANOVA)

The scores of A.C.R. obtained by children at
different levels were used as criterion to classify the A.A.
scores. Since the sample size for the study is large and
different groups are not comparable in size, a random sample
of 10 children was taken from each group for the purpose of
computing ANOVA.

TABLE 5.125

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	14711.67	7355.83	
				6.84
Within Conditions	27	29015.70	1074.66	

The F value for the difference among means of A.A. of High, Moderate and Low groups is 6.84 which is significant (significance of F at .05 = 3.35 and at .01 = 5.49 for df 2, 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low groups in their A.A.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

Testing of Hypothesis I.1.c

Hypothesis I.1.c. in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of A.H. The difference among the means of A.A. of children with different levels of A.H are tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of A.H. obtained by them. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing anova.

TABLE 5.127

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	29330.47	14665.23	
				8.90
Within Conditions	27	44504.90	1648.33	

The value of F which is significant (significance for F at .05 = 3.35 and 0.01 = 5.49 for df 2, 27). The obtained evidence does not support the null

hypothesis of no significant difference among means of A.A. Hence the hypothesis is rejected. There is a significant difference in the A.A. of children with different levels of A.H.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.128

MEANs AND SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF A.H.

Group	M	SD	SED	t	Level of Significance
High A.H.	236.6	38.14			
			17.10	3.59	Sig.
Moderate A.H.	175.9	38.31			
High A.H.	236.6	38.14			
			17.39	4.07	Sig.
Low A.H.	165.8	39.62			
Moderate A.H.	175.9	38.31			
			17.43	0.58	Not Sig.
Low A.H.	165.8	39.62			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate groups is 3.59 which is significant.

The 't' value for the difference between High and Low groups in their A.A. is 4.07. This value of 't' is significant. The 't' value for difference in means of A.A. for Moderate and Low levels is 0.58 which is not significant.

Testing of Hypothesis I.1.d.

The null hypothesis I.1.d. states that there is no significant difference in the A.A of Preschool children with different levels of E.P. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The scores of E.P. obtained by children at different levels were used as criterion to classify the A.A. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.129

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	25889.07	12944.53	
Within Conditions	27	42650.40	1579.64	8.19

The F value for the difference among means of A.A. of High, Moderate, and Low Groups is 8.19 which is significant (significance of F at .05 = 3.35 and at .01 = 5.49 for df 2, 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low Groups in their A.A.

As the F ratio refutes the null hypothesis, the 't' test is applied to find out which of the differences is significant.

TABLE 5.130

MEANs AND SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF E.P.

Group	M	SD	SED	t	Level of Significance
High E.P.	226.6	38.82			
			16.35	3.67	Sig.
Moderate E.P.	166.6	34.14			
High E.P.	226.6	38.82			
			16.41	3.93	Sig.
Low E.P.	162.2	34.42			
Moderate E.P.	166.6	34.14			
			15.33	0.29	Not sig.
Low E.P.	162.2	34.42			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate groups is 3.67 which is significant.

The 't' value for the difference between High and Low groups in their A.A. is 3.93. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate and low levels is 0.29 which is not significant.

Testing of Hypothesis I.1.e

Hypothesis I.1.e. in the null form states that there is no significant difference in the A.A. of Preschool children with different levels of I.P.R.. The difference among the means of A.A. of children with different levels of I.P.R. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of I.P.R. obtained by their parents. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.131

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	18041.27	9020.63	
				9.18
Within Conditions	27	26522.10	982.30	

The value of F which is 9.18 is significant (significance for F at .05 = 3.35 and .01 = 5.49 for df 2, 27). The obtained evidence does not support the null hypothesis of no significant difference among means of A.A. Hence the hypothesis is rejected. There is a significant difference in the A.A. of children with different levels of I.P.R..

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.132

MEANs AND SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF I.P.R..

Group	M	SD	SED	t	Level of Significance
High I.P.R.	257.2	23.83			
			8.98	4.88	Sig.
Moderate I.P.R.	213.4	15.44			
High I.P.R.	257.2	23.83			
			9.97	5.77	Sig.
Low I.P.R.	199.7	20.64			
Moderate I.P.R.	213.4	15.44			
			8.15	1.68	Not sig.
Low I.P.R.	199.7	20.64			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate groups is 4.88 which is significant.

The 't' value for the difference between High and Low groups in their A.A. is 5.77. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate and Low levels is 1.68 which is not significant.

Testing of Hypothesis I.1.f.

The null hypothesis I.1.f. states that there is no significant difference in the A.A. of Preschool children with different levels of F.P. The technique used to test the

hypothesis is the one way classification of analysis of variance (ANOVA)

The scores of F.P. obtained by parents at different levels were used as criterion to classify the A.A. scores. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.133

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	31528.47	15764.23	
				9.03
Within Conditions	27	47125.00	1745.37	

The F value for the difference among means of A.A. of High, Moderate and Low Groups is 9.03 which is significant (significance of F at .05 = 3.35 and at .01 = 5.49 for df 2, 27). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the High, Moderate and Low Groups in their A.A.

As the F ratio refutes the null hypothesis the 't' test is applied to find out which of the differences is significant.

TABLE 5.134

MEANS AND SDs OF A.A. OF CHILDREN WITH

DIFFERENT LEVELS OF F.P.

Group	M	SD	SED	t	Level of Significance
High F.P.	256.6	36.28			
			15.23	4.14	Sig.
Moderate F.P.	193.5	31.68			
High F.P.	256.6	36.28			
			15.57	4.71	Sig.
Low F.P.	183.3	33.28			
Moderate F.P.	193.5	31.68			
			14.53	0.70	Not sig.
Low F.P.	183.3	33.28			

Significance of 't' at .05 = 2.04, .01 = 2.77 for df 2, 27.

The 't' value for the difference between means of A.A. of High and Moderate groups is 4.14 which is significant.

The 't' value for the difference between High and Low groups in their A.A. is 4.71. This value of 't' is significant.

The 't' value for difference in means of A.A. for Moderate and Low levels is 0.70 which is not significant.

Testing of Hypothesis 1.1.q.

The null hypothesis I.l.q. states that there is no significant difference in the A.A. of Preschool children with different levels of P.C. The difference among the means of A.A. of children with different levels of P.C. are tested for significance using the ANOVA.

The criterion used for classifying the scores of the A.A. of children was on the basis of different levels of P.C. obtained by their parents. As the size of the sample is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.135

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	2	29725.87	14862.93	8.73
Within Conditions	27	45964.00	1702.37	

The value of F which is 8.73 is significant (significance for F at .05 = 3.35 and .01 = 5.49 for df 2,

27). The obtained evidence does not support the null hypothesis of no significant difference among means of A.A. Hence the hypothesis is rejected. There is a significant difference , in the A.A. of children with different levels of P.C.

As F has emerged significant it is necessary to treat the data to further process of testing. So, the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.136

MEANs AND SDs OF A.A. OF CHILDREN WITH
DIFFERENT LEVELS OF P.C..

Group	M	SD	SED	t	Level of Significance
High P.C.	245.0	34.15	16.15	3.62	Sig.
Moderate P.C.	186.6	37.97			
High P.C.	245.0	34.15	16.78	4.34	Sig.
Low P.C.	172.2	40.61			
Moderate P.C.	186.6	37.97	17.58	0.82	Not sig.
Low P.C.	172.2	40.61			

Significance of 't' at .05 = 2.04, .01 = 2.77

for df 2, 27.

The 't value for the difference between means of A.A. of High and Moderate groups is 3.62 which is significant.   .
The 't value for the difference between High and Low groups in their A.A. is 4.34. This value of 't' is significant.
The 't' value for difference in means of A.A. for Moderate and Low levels is 0.82 which is not significant.

Conclusions and Discussions

The results seem to emphatically highlight one very important aspect that P.I. is very essential for A.A. The children with high P.I. seem to significantly differ in their A.A. scores at 0.01 level from the Moderate and Low levels of P.I. The difference is not significant between the Moderate and Low levels. Taking the components of P.I. the High and the Moderate groups in A.C.R. differ significantly at 0.05 level whereas in all other components the significance is at 0.01 level.

J GROUP OF HYPOTHESIS

The parents of all the children were called for the interview but the responses varied. This was then coined is Parental Interest (P.Int.).

TABLE

TABLE SHOWING ATTENDANCE OF PARENTS AT INTERVIEW

==

Only Father	59
Only Mother	126
Both Parents	91
Non-Respondents	32
Total :	308

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This shows that only 276 childrens' parents responded and the rest did not attend the interview at all. Of the 276 who responded, children's Only Fathers' came, children's Only Mothers' came and childrens' Both Parents' came.

TESTING OF HYPOTHESIS OF DIFFERENCE - S.R. ON THE BASIS OF PARENTAL INTEREST.

Testing of Hypothesis J.1.

The null hypothesis J.1. states that there is no significant difference in the S.R. of Preschool children with different levels of Parental Interest. The technique used to test the hypothesis is the one way classification of analysis of Variance (ANOVA)

The scores of S.R. obtained by children were classified on the basis of Parental Interest. Since the sample size for the study is large and different groups are not comparable in size, a random sample of 10 children was taken from each group for the purpose of computing ANOVA.

TABLE 5.137

SUMS OF SQUARES AND MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups	3	3780.90	1260.30	
				9.44
Within Conditions	36	4807.00	133.53	

The F value for the difference among means of Parental Interest of different groups is 9.44 which is significant at 0.01 level (significance of F at .05 = 2.86 and at .01 = 4.38 for df 3, 36). Therefore the null hypothesis of no significant difference among means does not stand tenable. There is a significant difference among the different groups in their Parental Interest.

As the F ratio refutes the null hypothesis the 't' test is applied to find out which of the differences is significant.

TABLE 5.138

MEANS AND SDs OF S.R. OF CHILDREN WITH DIFFERENT
LEVELS OF PARENTAL INTEREST.

Attendance at the Interview	Gr.	M	SD	SED	t	Level of Significance
Only Father	1	45.6	12.84			
				5.14	2.80	Sig. at .01 level
Only Mother	2	60.0	9.99			
Only Father	1	45.6	12.84			
				4.51	4.68	Sig.at .01 level
Both Parents	3	66.7	6.18			
Only Father	1	45.6	12.84			
				5.85	0.36	Not Sig.
Non Respondents	4	43.5	13.34			
Only Mother	2	60.0	9.99			
				3.71	1.80	Not Sig.
Both Parents	3	66.7	6.18			
Only Mother	2	60.0	9.99			
				5.27	3.13	Sig.at .01 level
Non Respondents	4	43.5	12.34			
Both Parents	3	66.7	6.18			
				4.65	4.99	Sig.at .01 level
Non Respondents	4	43.5	13.34			

Significance of 't' at .05 = 2.02, .01 = 2.71 for df 3, 36.

The 't' value for the difference between means of S.R. of groups 1 and 2 is 2.80 which is significant.

The 't' value for the difference between groups 1 and 3 in

their S.R. is 4.68. This value of 't' is significant.
The 't' value for difference in means of S.R. for groups 1
and 4 is 0.36 which is not significant.
The 't' value for the difference between groups 2 and 3 in
their S.R. is 1.80. This value of 't' is not significant.
Between the 2nd and 4th group the 't' value for the
difference in their S.R. is 3.13 which is significant.
The 't' value for difference in means of S.R. for groups 3
and 4 is 4.09 which is significant.

TESTING OF HYPOTHESIS OF DIFFERENCE - A.A. ON THE BASIS OF PARENTAL INTEREST.

Testing of Hypothesis J.2.

Hypothesis J.2. in the null form states that
there is no significant difference in the A.A. of Preschool
children with different levels of Parental Interest. The
difference among the means of children with different levels
of A.A. are tested for significance using the ANOVA.

The criterion used for classifying the scores of
the A.A. of children was on the basis of different levels of
Parental Interest. As the size of the sample of the study
is large and different groups are not comparable in size, a
random sample of 10 children was taken from each group for
the purpose of computing ANOVA.

TABLE 5.139

SUMS OF SQUARES & MEAN VARIANCES

Source	df	Sums of Square	Mean Square	F
Between Groups		48078.50	16026.17	
				9.81
Within Conditions	36	58809.00	1633.58	

The value of F which is 9.81 is significant at 0.01 level (significance of F at .05 = 2.86 and at .01 = 4.38 for df 3 & 36). The obtained evidence does not support the null hypothesis of no significant difference among means.

Hence the hypothesis is rejected. There is a significant difference in the A.A. of children with different levels of Parental Interest.

As F has emerged significant it is necessary to treat the data to further process of testing. So the critical ratio test was applied to find out which of the 3 differences is significant.

TABLE 5.140

MEANS AND SDs OF A.A. OF CHILDREN WITH DIFFERENT LEVELS OF PARENTAL INTEREST.

Group	M	SD	SED	t	Level of Significance
Only Father	170.6	38.75			
			15.35	4.93	Sig.at .01 level
Only Mother	246.3	29.22			
Only Father	170.6	38.75			
			15.51	4.36	Sig.at .01 level
Both Parents	238.2	30.07			
Only Father	170.6	38.75			
			20.30	0.26	Not Sig.
Non Respondents	175.9	51.20			
Only Mother	246.3	29.22			
			13.26	0.61	Not Sig.
Both Parents	238.2	30.07			
Only Mother	246.3	29.22			
			18.64	3.78	Sig.at .01 level
Non Respondents	175.9	51.20			
Both Parents	238.2	30.07			
			18.78	3.32	Sig.at .01 level
Non Respondents	175.9	51.30			

Significance of 't' at .05 = 2.02, .01 = 2.71 for df 3, 36.

The 't' value for the difference between means of A.A. of groups 1 and 2 is 4.93 which is significant.

The 't' value for the difference between groups 1 and 3 in their A.A. is 9.36. This value of 't' is significant. The 't' value for difference in means of A.A. for groups 1 and 4 is 0.26 which is not significant. The 't' value for the difference between groups 2 and 3 in their A.A. is 0.61. This value of 't' is significant. Between the 2nd and 4th groups the 't' value for the difference in their A.A. is 3.78 which is significant. The 't' value for difference in means of S.R. for groups 3 and 4 is 3.32 which is significant.

Conclusions and Discussions

On the basis of the analysis it can be concluded that Parental Interest is an important factor influencing S.R. and A.A. of P.S.C. Children whose both parents attended the interview seem to significantly differ in their S.R. and A.A. scores from children whose only fathers attended or from Non-respondents. There was no significant difference however with children whose only mothers attended. The category of children whose only mothers attended differed again significantly from the children whose only fathers attended or were non-respondents. The difference is not significant between both parents and only mothers, perhaps because in a traditional family in India the role of mother is so important that it is able to provide all the necessary nurturing similar to the role of both parents.

CHAPTER VI

SUMMARY AND CONCLUSIONS.

Introduction :

Education has been found to be the most important ingredient responsible for the progress of man. No society or community has ever progressed without education. Hence there is growing concern about imparting education to all, particularly to young children in the best possible manner. Since the early years are the most critical years, educationists want to know how best to educate the young children, what are the components of an educational system and most of all what are the basic essentials for optimum learning process.

"The early years of a child may well be the most crucial as far as opportunities for effective educational experiences are concerned".₁ Bloom (1964); Clement et al (1984); Elkind (1982a); Fowler (1980a); Gray, Ramsey and Klaus (1982); Hunt (1961) and Schweinhart and Weikart (1980) to name a few, supported and confirmed the importance of

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1 Leeper, S.N., Witherspoon, R.L., Day, B. : Good Schools for Young Children. MacMillan Publishing Co. New York. Fifth Edition (1984) pp. 5.

environmental factors in influencing the early development of the child.[1]. Children, especially those from low-income families need relevant experiences for proper development. It is during these years that the bases for later development are laid. Habits and attitudes learned and adapted during these years remain with the person for a life time. Infact (Rawat 1970) has examined the need of early childhood education in India in the context of its national objectives.[2] He says "India as a socialist, democratic republic is committed to all its citizens right from their infancy and early childhood. In the interest of her optimum national development and progress, the highest possible development of her human resources is imperative".

Much of this learning depends on how ready the child is or made ready. These years comprise the years concerned by 'early childhood education'.

It has been found that in our educational system the curriculum and curriculum methods are pre-decided. Efforts are made to fit the child into the system, rather than the system be fitted according to the requirements of

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1 Eliason, C.F., Jenkins, L.T. : A Practical Guide to Early Childhood Curriculum. Merrill Publishing Co. Columbo, Toronto, London, Melbourne. Fourth edition (1990) pp. 6.

2 Grewal J.S. : Early Childhood Education. Bhargava Book House. Agra. First Edition (1984). pp. 5.

the children. Those who are not ready obviously do not fit into the system and their learning process gets affected.

The Issue :

The relative neglect by educationists of readiness and its paramount importance for learning is one of the strange paradoxes in the educational system. One wakes up when there are failures or when a child is slow in learning or there are associated problems in learning. The language of problems, difficulties, inadequacies and so on are familiar to all those so closely associated with learning and they want to do something about them. There are devices for correcting, by-passing or overcoming these but what about the normal average child, his capacities, capabilities? What about initiating, enhancing, stimulating, motivating and sustaining the pre-requisites of learning in him? Why not understand the aspects necessary for learning and prevent the ensuing problems due to lack of it? These remain relatively neglected in studying the emergence of competencies in children for learning.

Again, what about identifying potentially unready pre-school children. This would provide the base for early intervention efforts and compensatory programmes. On the positive side too the early identification of ready children in under privileged settings is of equal importance

for their optimum learning.

The Background :

A sizeable number of children at S.I.E.S. High school (pre-primary section) have been found to be having difficulties in meeting the demands of the school.

They had difficulties in paying attention, in concentrating, in comprehending, in socializing, in staying away from their mother and so on as expected at the pre-school stage.

The children attending the school belong to different socio-economic class. There is tremendous discrepancy in their learning capacities due to their varying readiness level.

There are also children who come from homes which belong to the underprivileged or disadvantaged class. These children not only entered school without much motivation for learning but also lacked the necessary stimulation that is essential at this formative stage.

Inspite of best efforts, equipment and

progressive techniques it was felt that the children were not receptive and the teachers sensed a kind of frustration with the lack of progress made. It was opined that proper insight into the capabilities of students who were ready for schooling would improve matters. Another opinion evinced was that if, through some kind of screening, the category of children admitted was ascertained, perhaps, problems revolving around their learning could be minimised and the possibility of spelling out the aspects involved was considered.

To combat all this and find some suitable solution, the researcher decided to work in the area of 'Readiness'. Something had to be done so that, the child's readiness and developmental aspects are taken into account along with the requirements of the schools, and young children are not subjected to a kind of exploitation, having to struggle to meet demands and expectations beyond their capacities.

Again, there are about 10% 'School failure' cases at the school. It is also recognised that many children who experience learning problems also suffer from sensory, physical, social, emotional or family problems, conditions that appear to predate school problems and render children more vulnerable to school failure. Identification of these children, at early school stage, can lead to

intervention that could reduce the risk of school failure.

Also about 2% of children at S.I.E.S. are later discovered to be educationally handicapped who should have been identified earlier and referred for remedial-educational and related, services. An enquiry with few of the special schools also revealed that children were brought to them late and very rarely at the pre-school stage during which time much could have been done to change the course of the child's life.

Need of the Study

All children do not enter school at the same level of understanding and with the same capabilities and though chronologically, they may be at the same age level, there are some who are more advanced in their development, understanding, knowledge and capacities and are much better equipped to meet the expectations, requirements and demands of schools. There are others who may be just above average and somehow manage to scrape through. But there are a few who may have to struggle so much that they may, ultimately, lag behind and become school failures and dropouts.

There is need to identify such specific needs of children which are not being met in the existing educational

system. Since the child's future school success is strongly determined by his school readiness, a screening device which would help to point out deficits is necessary. It is very essential to provide adequate support for these children, so that the differences could be levelled and an equal start ensured for all. It is imperative to define the criteria for school readiness and find adequate measurement techniques. This will indicate what percentage of children are mature enough to take on school responsibilities. This will aid the school authorities to concentrate ways of reorganising educational functions at the beginning of school instruction so that an equal start is provided for all.

Thus, to combat the problem of children who have initial difficulties in coping with the expectations of the school there is need to work out some strategy. It was felt that these children were not ready for schooling, not prepared for the tasks to be performed for academic learning. It was necessary, then, to investigate into the whole phenomenon. How is it that some children are ready for schooling and learning and go through swiftly whereas there are others who face innumerable impediments and lag behind in most of the tasks.

Statement of the Problem

"An Investigation into the Scholastic Readiness of Pre-School
Child."

The variables of the study are:

1.   Scholastic Readiness

2.   Academic Achievement

3.   Personal Abilities

4.   Home Background

Definitions of Terms

Readiness:

Readiness, Asubel proposed, is "the adequacy of existing capacity in relation to the demands of a given learning task"[1].

According to C.V. Good "Readiness is willingness, desire and ability to engage in a given activity, depending on the learner's level of maturity, previous experience and mental emotional state"[2]. The level of development at which an individual has the capacity to undertake the learning of a specified subject of study or the age at which the average group of individuals have the specified capacity (such as reading readiness).

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1   Ausubel, D.D. : Viewpoints from Related Disciplines Human Growth and Development. Teachers College Record LX 1959. pp. 245-254.

2   Good, C.V., Markel, W.R., (Ed): Op. Cit. p. 472.

Scholastic

C.V. Good defines 'Scholastic' as "An organised group of pupils pursuing defined studies at defined levels and receiving instruction from one or more teachers frequently with the addition of the employees and officers such as a principal, various supervisors of instruction and a staff of maintenance workers usually housed in a single building or a group of buildings".[1]

Scholastic Readiness (S.R.)

Scholastic Readiness is defined as the child's attainment of a degree of physical, intellectual, social and emotional development sufficient to enable him to fulfill school requirements and to assimilate the curriculum content.

Scholastic Readiness is 'Readiness of the child for the learning process as a whole including the maturational and developmental aspects equal to school's entry and promotional requirements.

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[1] Good, C.V., Markel, W.R., (Ed): Op. Cit. p. 511.

Pre-School Child (P.S.C.)

Pre-school child is a child in the age group of 2-1/2 to 5-1/2 years - at the beginning of which the child is usually admitted to a nursery school. It is also referred to as the 'Early childhood Stage".

Pre-School Education (P.S.E.)

Pre-school education is an 'Early Childhood' programme' emphasizing the training, education and total development of the child.

The method and theory of guiding young children in a group generally refers to education demonstrated in nursery schools. Emphasis is placed on developing capacities of the individual and on helping him to meet his problems.

This general term embraces the different types of education available for the under-fives and includes nursery schools, nursery classes and pre-school play groups. In India, there is no statutory obligation for local education authorities to provide pre-school education. Hence there is lack of awareness of importance of pre-school education and resulting neglect of the same.

Academic Achievement (A.A.)

The scores obtained by the individual child in the academic performance is taken as A.A. The school conducts two Unit Tests (U.T.) one in each term and two exams at the end of the semesters (S.E.). A.A. comprises of three sub categories - Language Scores (L.S), Number Work (N.W.) and General knowledge (G.K.). Each of the subcategory carries 100 marks totalling to 300 on the whole.

Personal Abilities (P.A.)

The child's abilities in 'Other activities' (O.A.) and Self Attributes (S.A.) were included in this.

Other activities which consisted of Painting, Drawing, Creative work, Clay and Puzzles were taken up to see how far a child is proficient in them. These activities were conducted in the school as co-curricular activities.

The self attributes like Personal Development, Mental Abilities, Social Skills and Personality Traits were graded by the teachers which were maintained in the Teacher Rating Scale.

Home Environment (H.E.)

H.E was the environment - the conditions in which the child was growing up. It comprised of two categories - Home background (H.B) and Parental Involvement (P.I.). Home background was the background of the child's home which constituted - Parental education, their occupation, Socio-economic status, number of siblings and the residential area.

P.I. was the involvement of the parents in the child's growth and development - What type of interaction and involvement is offered to the child. This P.I. was measured through 6 broad aspects which had 10 sub-aspects in it. The 6 broad aspects were Attitude to Child Rearing, Actual Handling, Inter personal relations, Expectations of Parents, Facilities provided and Preparation of the Child.

Aims of the Study:

The aims of this study can be classified into four broad categories.

Firstly, to investigate into the concept of scholastic readiness of Pre-school children - what is it that

constitutes S.R., what contributes to S.R. and what are the components of S.R.

Secondly, the aim was to prepare a screening device to measure S.R. and use the tool to compare children with different levels of S.R.

Thirdly, to probe into the Home Background and Parental Involvement and their relative influence on S.R. and A.A.

Fourthly, to make suggestions to identify unreadiness and suggest ways of enhancing Scholastic Readiness.

Objectives of the Study:

1. To study and research in the area of S.R.

2. To identify areas and aspects favourable for S.R.

3. To design an appropriate screening device to measure S.R. of P.S.C.

4. To find out whether screening aids in identifying children who are scholastically not ready.

5. To find out whether screening aids in pinpointing specific areas in which the child is scholastically unready.

6   To enlist the components of S.R.

7. To identify factors responsible for S.R.

8. To study the relationship between S.R. and A.A.

9 To study the effect of S.R. on A.A.

10. To find the effect of S.R. on adjustment to school.

11. To compare children with different levels of S.R. on A.A.

12. To compare children with different levels of A.A. on S.R.

13. To study H.B. and its influence on S.R. of children.

14. To study H.B. and its influence on A.A. of children.

15. To study the effect of P.I. in their children on S.R.

16. To study the effect of P.I. in their children on A.A.

17. To study the effect of P.Int in their children on S.R.

18. To study the effect of P Int in their children on A.A.

19. To find out the differences in A.A. of children with different levels of S.R.

20. To find out the differences in S.R. of boys and girls.

21 To find out the differences in A.A. of boys and girls.

22. To find out the differences in S.R. of P.S.C. from different age groups.

23. To suggest enrichment programmes that may help children who are not ready.

24. To suggest intervention and compensatory programmes for children who are unready.

Hypotheses:

A Group of Hypotheses

        Hypotheses of Relationship

                S.R. - A.A.

B Group of Hypotheses

        Hypotheses of Difference

                A.A. - S.R.

C Group of Hypotheses

        Hypotheses of Difference in

                S.R. - Boys and Girls

                A.A. - Boys and Girls.

D. Group of Hypotheses

        Hypotheses of Difference

                S.R. - Age

E. Group of Hypotheses

        Hypotheses of Difference

                S.R. - O.A.

F Group of Hypotheses

        Hypotheses of Relationship

                S.R.-T.R.

G Group of Hypotheses

        Hypotheses of Difference

                S.R.-H.B.

H   Group of Hypotheses

       Hypotheses of Difference

            S.R. - P.I.

I   Group of Hypotheses

       Hypotheses of Difference

            A.A. - P.I.

J   Group of Hypotheses

       Hypotheses of Difference

            S.R. - P. Int

            A.A. - P. Int.

A Group of Hypotheses of relationship.

A 1. a) There is no significant relationship between S.R. and A.A. of P.S.C..

    b) There is no significant relationship between S.R. and A.A. of P.S.C. at 1st U.T..

    c) There is no significant relationship between S.R. and A.A. of P.S.C. at 1st S.E..

    d) There is no significant relationship between S.R. and A.A. of P.S.C. at 2nd U.T..

    e) There is no significant relationship between S.R. and A.A. of P.S.C. at 2nd S.E..

A 2. a) There is no significant relationship between M.S. and A.A. of P.S.C..

b) There is no significant relationship between M.S. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between M.S. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between M.S. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between M.S. and A.A. of P.S.C. at 2nd S.E..

A 3. a) There is no significant relationship between C.S. and A.A. of P.S.C..

b) There is no significant relationship between C.S. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between C.S. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between C.S. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between C.S. and A.A. of P.S.C. at 2nd S.E..

A 4. a) There is no significant relationship between P.S. and A.A. of P.S.C..

b) There is no significant relationship between P.S. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between P.S. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between P.S. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between P.S. and A.A. of P.S.C. at 2nd S.E..

A 5. a) There is no significant relationship between C.E.L. and A.A. of P.S.C..

b) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 1st U.T..

c) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 1st S.E..

d) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 2nd U.T..

e) There is no significant relationship between C.E.L. and A.A. of P.S.C. at 2nd S.E..

B Group Hypotheses of Difference.

B 1. a) There is no significant difference in the A.A. of P.S.C. with different levels of S.R.

b) There is no significant difference in the A.A. of P.S.C. with different levels of M.S.

c) There is no significant difference in the A.A. of P.S.C. with different levels of C.S.

d) There is no significant difference in the A.A. of P.S.C. with different levels of P.S.

e) There is no significant difference in the A.A. of P.S.C. with different levels of C.E.L..

B 2. a) There is no significant difference in the L.S. of P.S.C. with different levels of S.R.

b) There is no significant difference in the L.S. of P.S.C. with different levels of M.S.

c) There is no significant difference in the L.S. of P.S.C. with different levels of C.S.

d) There is no significant difference in the L.S. of P.S.C. with different levels of P.S.

e) There is no significant difference in the L.S. of P.S.C. with different levels of C.E.L..

B 3. a) There is no significant difference in the N.W. of P.S.C. with different levels of S.R.

b) There is no significant difference in the N.W. of P.S.C. with different levels of M.S.

c) There is no significant difference in the N.W. of P.S.C. with different levels of C.S.

d) There is no significant difference in the N.W. of P.S.C. with different levels of P.S.

e) There is no significant difference in the N.W. of P.S.C. with different levels of C.E.L..

B 4. a) There is no significant difference in the G.K. of P.S.C. with different levels of S.R.

b) There is no significant difference in the G.K. of P.S.C. with different levels of M.S.

c) There is no significant difference in the G.K. of P.S.C. with different levels of C.S.

d) There is no significant difference in the G.K. of P.S.C. with different levels of P.S.

e) There is no significant difference in the G.K. of P.S.C. with different levels of C.E.L..

C Group Hypotheses of Difference.

C 1. a) There is no significant difference in the S.R. of boys and girls.

b) There is no significant difference in the M.S. of boys and girls.

c) There is no significant difference in the C.S. of boys and girls.

d) There is no significant difference in the P.S. of boys and girls.

e) There is no significant difference in the C.E.L. of boys and girls.

C 2. a) There is no significant difference in the A.A. of boys and girls.

b) There is no significant difference in the A.A. at 1st U.T. of boys and girls.

c) There is no significant difference in the A.A. at 1st S.E. of boys and girls.

d) There is no significant difference in the A.A. at 2nd U.T. of boys and girls.

e) There is no significant difference in the A.A. at 2nd S.E. of boys and girls.

C 3. a) There is no significant difference in the L.S. of boys and girls.

b) There is no significant difference in the L.S. at 1st U.T. of boys and girls.

c) There is no significant difference in the L.S. at 1st S.E. of boys and girls.

d) There is no significant difference in the L.S. at 2nd U.T. of boys and girls.

e) There is no significant difference in the L.S. at 2nd S.E. of boys and girls.

C 4. a) There is no significant difference in the N.W. of boys and girls.

b) There is no significant difference in the N.W. at 1st U.T. of boys and girls.

c) There is no significant difference in the N.W. at 1st S.E. of boys and girls.

d) There is no significant difference in the N.W. at 2nd U.T. of boys and girls.

e) There is no significant difference in the N.W. at 2nd S.E. of boys and girls.

C 5. a) There is no significant difference in the G.K. of boys and girls.

b) There is no significant difference in the G.K. at 1st U.T. of boys and girls.

c) There is no significant difference in the G.K. at 1st S.E. of boys and girls.

d) There is no significant difference in the G.K. at 2nd U.T. of boys and girls.

e) There is no significant difference in the G.K. at 2nd S.E. of boys and girls.

D Group Hypotheses of Difference.

D 1. a) There is no significant difference in the S.R. of P.S.C. from different age groups.

b) There is no significant difference in the M.S. of P.S.C. from different age groups.

c) There is no significant difference in the C.S. of P.S.C. from different age groups.

d) There is no significant difference in the P.S. of P.S.C. from different age groups.

e) There is no significant difference in the C.E.L. of P.S.C. from different age groups.

E Group Hypotheses of Difference.

E   a) There is no significant difference in the O.A. of
       P.S.C. with different levels of S.R.

    b) There is no significant difference in the O.A. of
       P.S.C. with different levels of M.S.

    c) There is no significant difference in the O.A. of
       P.S.C. with different levels of C.S.

    d) There is no significant difference in the O.A. of
       P.S.C. with different levels of P.S.

    e) There is no significant difference in the O.A. of
       P.S.C. with different levels of C.E.L..

E Group Hypotheses of Relationship

    1. There is no significant relationship between S.R. of
        P.S.C. and T.R. on S.A.

    2. There is no significant relationship between S.R. of
        P.S.C. and T.R. on P.D.

    3. There is no significant relationship between S.R. of
        P.S.C. and T.R. on M.A.

    4. There is no significant relationship between S.R. of
        P.S.C. and T.R. on S.A.

5. There is no significant relationship between S.R. of P.S.C. and T.R. on P.T.

6. There is no significant relationship between S.R. of P.S.C. and T.R. on K.E.

B. Group Hypotheses of Difference

1. There is no significant difference in the S.R. of P.S.C. with different levels of P.E.

2. There is no significant difference in the S.R. of P.S.C. with different levels of M.E.

3. There is no significant difference in the S.R. of P.S.C. with different levels of F.E.

4. There is no significant difference in the S.R. of P.S.C. with different levels of M.O.

5. There is no significant difference in the S.R. of P.S.C. with different levels of F.O.

6. There is no significant difference in the S.R. of P.S.C. with different levels of S.E.S.

7. There is no significant difference in the S.R. of P.S.C. with N.S.

8. There is no significant difference in the S.R. of P.S.C. from different R.A.

H Group Hypotheses of difference

1. There is no significant difference in the S.R. of P.S.C. with different levels of P.I.

2. There is no significant difference in the S.R. of P.S.C. with different levels of A.C.R.

3. There is no significant difference in the S.R. of P.S.C. with different levels of A.H.

4. There is no significant difference in the S.R. of P.S.C. with different levels of E.P.

5. There is no significant difference in the S.R. of P.S.C. with different levels of I.P.R.

6. There is no significant difference in the S.R. of P.S.C. with different levels of F.P.

7. There is no significant difference in the S.R. of P.S.C. with different levels of P.C.

I Group Hypotheses of Difference

1. There is no significant difference in the A.A. of P.S.C. with different levels of P.I.

2. There is no significant difference in the A.A. of P.S.C. with different levels of A.C.R.

3. There is no significant difference in the A.A. of P.S.C. with different levels of A.H.

4. There is no significant difference in the A.A. of P.S.C. with different levels of E.P.

5. There is no significant difference in the A.A. of P.S.C. with different levels of I.P.R.

6. There is no significant difference in the A.A. of P.S.C. with different levels of F.P.

7. There is no significant difference in the A.A. of P.S.C. with different levels of P.C.

1 Group Hypotheses of difference

1. There is no significant difference in the S.R. of children with different levels of P.Int.

2. There is no significant difference in the A.A. of children with different levels of P.Int.

The Research Design.

The present study seeks to describe the Scholastic Readiness of Pre-school children, delve into the factors in the home affecting it and examine its influence on the Academic Achievement of the child.

The study could be broadly categorised into two stages. The first stage which deals with the 'Readiness' aspect of Pre-school children and the influence of 'Academic Achievement' of the child. The second stage deals with 'Home Environment' as a factor which would influence the 'Scholastic Readiness' of the child. Hence in this study, 'Scholastic Readiness' is both a dependent and an independent variable. In the first stage Scholastic Readiness is an independent variable and Academic Achievement and Personal Abilities are the dependent variables. In the first part it is attempted to find out how much Academic Achievement and Personal Abilities are dependent on the S.R., or in other words, how does S.R. influence the Academic Achievement and Personal Abilities of the child.

In the second stage, Home Environment is the independent variable and the Scholastic Readiness the dependent variable. The attempt here is to find out what influence H.E. exercises on S.R.

The aspects included in this study under each variable are given below.

1. Scholastic Readiness

   a. Motor Skills.

   b. Cognitive Skills.

   c. Psychosocial Skills.

   d. Language Skills.

e. Socio-economic Status.

f. Number of Siblings.

g. Residential area.

B. Parental Involvement and Interest.

a. Attitude to Child Rearing.

b. Actual Handling.

c. Expectations of Parents.

d. Interpersonal Relations.

e. Facilities provided.

f. Preparation of the child for schooling.

g. Attendance at the interview.

Methods :

The purpose of the study is to investigate into the Scholastic Readiness of Pre-school children, the associated aspects in the child and at home, and its influence on Academic Achievement. The study is mainly an exploratory one.

The method used is the descriptive method of the comparative and correlative types . It attempts to describe the Scholastic Readiness of the Pre-school children, and the aspects involved. It also attempts to describe the environmental conditions at home delving deep into the home

factors that influence the child's Scholastic Readiness. Lastly it attempts to study the influence of Scholastic Readiness on the Academic Achievement of the child. It also attempts to compare children with different levels of Scholastic Readiness on Academic Achievement and children with different Home Background on Scholastic Readiness. The correlation between Scholastic Readiness and Academic Achievement is also established.

Sample :

The population of the study was the pre-school age children.

Sampling Method:

Incidental sampling method was used i.e. the children who were studying in S.I.E.S. - those who sought admission and were admitted, formed the sample for the various aspects of the study. They consisted of both boys and girls between the ages of 3 to 5 1/2 years. The sample is basically urban in nature though there were some whose parents have been recent migrants to the city. They belonged to middle S.E.S. and lower S.E.S. families.

Nature & Size of the Sample:

Preliminary Study: Children studying in the year 1985-1986

batch numbering 484 comprised the sample for the preliminary study to investigate into the characteristics associated with scholastic achievement and enlist them.

Pre-Test: 15 children were selected randomly from those who sought admission in 1986-87 to conduct a pre-test to determine the administration procedure of the screening device.

Pre-Pilot 50 children were selected again randomly from those who sought admission in 1986-87 and the screening device was administered for item analysis and discrimination index.

Pilot-Study: 344 children who sought admission in 1986-87 for Jr. K.G. Class comprised the sample for administering the final form of 'Scholastic Readiness Screening Device to establish the reliability of the tool.

Final Sample: Children admitted in S.I.E.S. in 1987-88 numbering 337 of which 308 joined the school, comprised the sample for describing the Scholastic Readiness of pre-school children, studying the influence of the home background on it and examining its relationship with A.A.

Table 6.1 shows the Nature and size of the sample at various stages of the study.

TABLE 6.1

NATURE AND SIZE OF THE SAMPLE

AT VARIOUS STAGES OF THE STUDY

Nature of Work Stage	Year	Boys	Girls	Total Sample
Preliminary Study	1985-86			
	Jr.K.G.	139	124	263
	Sr.K.G.	114	107	221
				484
Pre-test	1986 Jan	8	7	15
Pre-Pilot	1986 Jan	27	23	50
Pilot Study	1986 Feb			
No Screened		244	179	423
No.Selected for Admission		213	158	371
Took Admission		198	146	344
	1987 Feb			
No. Screened		279	178	457
No Selected for Admission		230	139	369
Took Admission		213	124	337
Sample of parents		177	101	278
Sample for Final Study				
Took Admission		213	124	337
Remaining with us		192	116	308

<u>Tools Used:</u>

To collect the required data necessary to investigate into the Scholastic Readiness and the influence of the Home Environment, and the relation of Scholastic Readiness with Academic Achievement, appropriate tools were required . The data required for the study were in the following areas:

(a) Scholastic Readiness of the Pre-school children.

(b) Academic Achievement of the pre-school children.

(c) Personal Abilities of the pre-school children.

(d) Home Environment of the Pre-School children

The tools used by the researcher could be broadly categorised into two :-

(i) Tools devised by the researcher.

(ii) Tools adopted from the school records.

In the former category were

a. Scholastic Readiness Screening Device.

b. Interview Schedule (for parents).

In the latter category were :

a. Checklist.

b. Admission forms.

c. Progress Report Card.

d. Rating scale.

Data were collected from children and parents.
While constructing the tools all the necessary pre-requisites
were carefully considered that is

1. Scanning of related literature on tools.

2. Studying the procedures to be followed while devising a
   tool for the very young.

3. Conducting a survey of P.S.C. at S.I.E.S. to ascertain
   the characteristics associated with High and Low
   achievers.

4. Appropriate selection of items.

5. Item Analysis and Discrimination Index.

6. Content validity.

7. Deciding the administration procedure and scoring.

8. Reliability of the tools (Test-retest reliability).

The construction of tools went through

A Pre-Study - for determining the items.

A Pre-Test - for determining the administration.

A Pre-Pilot - for item analysis and discrimination index.

A Pilot study - test-retest reliability.

Scoring

For 'S.R. device'

The S.R. screening device on the whole carried 100
scores thus.

Motor skills	30
Cognitive skills	30
Psychrosocial skills	30
Comprehension of English Language	10

Total	100

Each of the category had subdivisions.

For the 'Interview Schedule'.

A three point scale has been provided for scoring - Yes, No, Don't know were the three alternative answers. The highest a parent could score in an item was 3 and the lowest 1. In each of the variable a parent could score maximum of 30 and minimum of 10 scores. On the whole the entire Interview schedule carried 180 marks. Manual scoring was done of all the variables with the help of one assistant. After completing the scoring, the score tables and data-sheet were prepared.

Data Collection.

The researcher personally administered the tools and collected the data. The data was collected from P.S.C. and their parents. Absolute care was taken to establish the

necessary rapport particularly with the children and ensure confidentiality to the parents.

Analysis of Data

Description of Data : Data are described using frequency distributions, frequency polygons, percentage distributions and polygons, bar diagrams, mean, median, mode, skewness, S.D. and kurtosis.

Fiduciary limits for the mean and SD were also found out at the 0.05 and 0.01 levels.

Inferential Analysis : Hypotheses are tested using correlation of coefficient, One-way analysis of variance or ANOVA and t-test.

Those hypotheses indicating relationships are tested using correlational techniques and their significances are found.

The null hypotheses of differences are tested employing the one way ANOVA and the 't-test'.

Major Findings :

The various null hypothesis were tested by use of the appropriate techniques and the findings in each case

are as follows :

A. 1 a) There is a significant positive but moderate relationship between S.R. and A.A. of P.S.C.

b) There is a significant positive and substantial relationship between S.R. and A.A. of P.S.C. at 1st U.T.

c) There is a significant positive, moderate relationship between S.R. and A.A. of P.S.C. at 1st S.E.

d) There is a significant positive but low relationship between S.R. and A.A. of P.S.C. at 2nd U.T.

e) There is a significant positive but very low relationship between S.R. and A.A. of P.S.C. at 2nd S.E.

A. 2 a) There is a significant, low but positive relationship between M.S. and A.A. of P.S.C.

b) There is a significant, moderate and positive relationship between M.S. and A.A. at 1st U.T. of P.S.C.

c) There is a significant, moderate and positive, relationship between M.S. and A.A. at 1st S.E. of P.S.C.

d) There is a significant low but positive relationship between M.S. and A.A. at 2nd U.T. of P.S.C.

e) There is a significant very low but positive relationship between M.S. and A.A. at 2nd S.E. of P.S.C.

A. 3 a) There is a significant, positive and moderate relationship between C.S. and A.A. of P.S.C.

b) There is a significant, positive and substantial relationship between C.S. and A.A. at 1st U.T. of P.S.C.

c) There is a significant, positive and substantial relationship between C.S. and A.A. at 1st S.E. of P.S.C.

d) There is a significant, positive and moderate relationship between C.S. and A.A. at 2nd U.T. of P.S.C.

e) There is a significant, positive but low relationship between C.S. and A.A. at 2nd S.E. of P.S.C.

A. 4 a) There is a significant, moderate but positive relationship between P.S. and A.A. of P.S.C.

b) There is a significant, substantial and positive relationship between P.S. and A.A. at 1st U.T. of P.S.C.

c) There is a significant, positive and moderate relationship between P.S. and A.A. at 1st S.E. of P.S.C.

d) There is a significant low but positive relationship between P.S. and A.A. at 2nd U.T. of P.S.C.

e) There is a significant, positive but low relationship between P.S. and A.A. at 2nd S.E. of P.S.C.

A. 5 a) There is a significant, moderate and positive relationship between C.E.L. and A.A. of P.S.C.

b) There is a significant, substantial and positive relationship between C.F.L. and A.A. at 1st U.T. of P.S.C.

c) There is a significant, positive and moderate relationship between C.E.L. and A.A. at 1st S.E. of P.S.C.

d) There is a significant, moderate and positive relationship between C.E.L. and A.A. at 2nd U.T. of P.S.C.

e) There is a significant, low but positive relationship between C.E.L. and A.A. at 2nd S.E. of P.S.C.

On the basis of the above findings it can be concluded that Scholastic Readiness is related to the

Academic Achievement of Pre-school Children. The relationship between Scholastic Readiness and Academic Achievement are positive though moderate. It may be observed that the relationship is highest at the 1st U.T., that is, the start of the school, decreasing gradually till the final exams, that is at the end of the year. No one can deny the importance of starting something well equipped to take up the demands and expectations of that task. Hence, then it goes without saying that Scholastic Readiness in itself strengthens the child's abilities to face the school requirements which in turn aids in acquiring better 'Academic scores'. Needless to add, the irrepairable damage that the lack of this readiness could cause would range from low scores in Academic Achievement, struggling to cope with the expectations of school to low Self-Image and 'Self Concept'. This has been also supported by several studies mentioned in Chapter II aggravating the problems of school failures, school dropouts, stagnation, etc.

The components of Scholastic Readiness also have a close link with Academic Achievement though in varying degrees. Of the components, Comprehension of English Language (C.E.L.) and Cognitive skills (C.S.) have a higher relationship followed by Psychosocial skills (P.S.) and Motor skills (M.S.). The trend is the same with all the components i.e. a close link with Academic Achievement though in varying degrees. This can be observed from the correlation matrix

given in Table 5.1 - that is the relationship of components of Scholastic Readiness and Academic Achievement is high to begin with at 1st U.T. tapering gradually to low as with the advancement of the year. It may be concluded that the C.E.L. and C.S. are significant determinants of Academic Achievement for Pre-school Children. All the components of Scholastic Readiness are significantly correlated with the scores of Academic Achievement.

B. 1 a) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of S.R.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of S.R.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of S.R.

b) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of M.S.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of M.S.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of M.S.

c) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of C.S.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of C.S.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of C.S.

d) There is a significant difference in the A.A. of P.S.C. at 0.05 level with High and Moderate levels of P.S.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of P.S.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of P.S.

e) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of C.E.L.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of C.E.L.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of C.E.L.

B. 2 a) There is a significant difference in the L.S. of P.S.C. with High and Moderate levels of S.R.

There is a significant difference in the L.S. of P.S.C. with High and Low levels of S.R.

There is no significant difference in the L.S. of P.S.C. with Moderate and Low levels of S.R.

b) There is a significant difference in the L.S. of P.S.C at 0.05 level with High and Moderate levels of M.S.

There is a significant difference in the L.S. of P.S.C. with High and Low levels of M.S.

There is no significant difference in the L.S. of P.S.C. with Moderate and Low levels of M.S.

c) There is a significant difference in the L.S. of P.S.C at 0.05 level with High and Moderate levels of C.S.

There is a significant difference in the L.S. of P.S.C. with High and Low levels of C.S.

There is no significant difference in the L.S. of P.S.C. with Moderate and Low levels of C.S.

d) There is a significant difference in the L.S. of P.S.C at 0.05 level with High and Moderate levels of P.S.

There is a significant difference in the L.S. of P.S.C. with High and Low levels of P.S.

There is no significant difference in the L.S. of P.S.C. with Moderate and Low levels of P.S.

e) There is a significant difference in the L.S. of
P.S.C. with High and Moderate levels of C.E.L.

There is a significant difference in the L.S. of
P.S.C. with High and Low levels of C.E.L.

There is no significant difference in the L.S. of
P.S.C. with Moderate and Low levels of C.E.L.

B. 3 a) There is a significant difference in the N.W. of
P.S.C. with High and Moderate levels of S.R.

There is a significant difference in the N.W. of
P.S.C. with High and Low levels of S.R.

There is no significant difference in the N.W. of
P.S.C. with Moderate and Low levels of S.R.

b) There is a significant difference in the N.W. of
P.S.C. at 0.05 level with High and Moderate levels of
M.S.

There is a significant difference in the N.W. of
P.S.C. with High and Low levels of M.S.

There is no significant difference in the N.W. of
P.S.C. with Moderate and Low levels of M.S.

c) There is a significant difference in the N.W. of
P.S.C. High and Moderate levels of C.S.

There is a significant difference in the N.W. of P.S.C. with High and Low levels of C.S.

There is no significant difference in the N.W. of P.S.C. with Moderate and Low levels of C.S.

d) There is a significant difference in the N.W. of P.S.C. with High and Moderate levels of P.S. at 0.05 level.

There is a significant difference in the N.W. of P.S.C. with High and Low levels of P.S.

There is no significant difference in the N.W. of P.S.C. with Moderate and Low levels of P.S.

e) There is a significant difference in the N.W. of P.S.C. with High and Moderate levels of C.E.L.

There is a significant difference in the N.W. of P.S.C. with High and Low levels of C.E.L.

There is no significant difference in the N.W. of P.S.C. with Moderate and Low levels of C.E.L.

B. 4 a) There is a significant difference in the G.K. of P.S.C. with High and Moderate levels of S.R.

There is a significant difference in the G.K. of P.S.C. with High and Low levels of S.R.

There is no significant difference in the G.K. of P.S.C. with Moderate and Low levels of S.R.

b) There is a significant difference in the G.K. of P.S.C at 0.05 level with High and Moderate levels of M.S.

There is a significant difference in the G.K. of P.S.C. with High and Low levels of M.S.

There is no significant difference in the G.K. of P.S.C. with Moderate and Low levels of M.S.

c) There is a significant difference in the G.K. of P.S.C at 0.05 level with High and Moderate levels of C.S.

There is a significant difference in the G.K. of P.S.C. with High and Low levels of C.S.

There is no significant difference in the G.K. of P.S.C. with Moderate and Low levels of C.S.

d) There is a significant difference in the G.K. of P.S.C at 0.05 level with High and Moderate levels of P.S.

There is a significant difference in the G.K. of P.S.C. with High and Low levels of P.S.

There is no significant difference in the G.K. of P.S.C. with Moderate and Low levels of P.S.

e) There is a significant difference in the G.K. of P.S.C. with High and Moderate levels of C.E.L.

There is a significant difference in the G.K. of P.S.C. with High and Low levels of C.E.L.

There is no significant difference in the G.K. of P.S.C. with Moderate and Low levels of C.E.L.

On the basis of the results it can be concluded that the children with high scores in Scholastic Readiness score distinctly high scores in Academic Achievement. The difference is maximum in High and Low groups constantly. The difference in High and Moderate groups is significant and the Moderate and Low groups do not differ at all.

The same trend can be observed with all the components though in varying degrees. Children with high scores in these components fare much better in Academic Achievement. The difference here again is highest in High and Low groups all throughout. The High and Moderate differ to a certain extent but the Moderate and low do not differ at all.

C. 1 a) There is no significant difference in the S.R. of boys and girls.

b) There is no significant difference in the M.S. of boys and girls.

c) There is no significant difference in the C.S. of boys and girls.

d) There is no significant difference in the P.S. of boys and girls.

e) There is no significant difference in the C.E.L. of boys and girls.

C. 2 a) There is no significant difference in the A.A. of boys and girls.

b) There is no significant difference in the A.A. at 1st U.T. of boys and girls.

c) There is no significant difference in the A.A. at 1st S.E. of boys and girls.

d) There is no significant difference in the A.A. at 2nd U.T. of boys and girls.

e) There is no significant difference in the A.A. at 2nd S.E. of boys and girls.

C. 3 a) There is no significant difference in the L.S. of boys and girls.

b) There is no significant difference in the L.S. at 1st U.T. of boys and girls.

c) There is no significant difference in the L.S. at 1st S.E. of boys and girls.

d) There is no significant difference in the L.S. at 2nd U.T. of boys and girls.

e) There is no significant difference in the L.S. at 2nd S.E. of boys and girls.

C. 4 a) There is no significant difference in the N.W. of boys and girls.

b) There is no significant difference in the N.W. at 1st U.T. of boys and girls.

c) There is no significant difference in the N.W. at 1st S.E. of boys and girls.

d) There is no significant difference in the N.W. at 2nd U.T. of boys and girls.

e) There is no significant difference in the N.W. at 2nd S.E. of boys and girls.

C. 5 a) There is no significant difference in the G.K. of boys and girls.

b) There is no significant difference in the G.K. at 1st U.T. of boys and girls.

c) There is no significant difference in the G.K. at 1st S.E. of boys and girls.

d) There is no significant difference in the G.K. at 2nd U.T. of boys and girls.

e) There is no significant difference in the G.K. at 2nd S.E. of boys and girls.

The conclusion that seems to be interesting is that Sex does not affect the S.R. or the Academic Achievement of the Pre-school Children. There is no significant difference in both Scholastic Readiness and Academic Achievement of boys and girls.

D. 1) There is no significant difference in the S.R. of P.S.C. from different age groups.

2) There is no significant difference in the M.S. of P.S.C. from different age groups.

3) There is no significant difference in the C.S. of P.S.C. from different age groups.

4) There is no significant difference in the P.S. of P.S.C. from different age groups.

5) There is no significant difference in the C.E.L. of P.S.C. from different age groups.

The conclusion that emerges from these findings is that Scholastic Readiness is not affected by the age of the child. This means that there is some other factor influencing Scholastic Readiness.

a) There is a significant difference in the O.A. of P.S.C. with High and Moderate levels of S.R.

There is a significant difference in the O.A. of P.S.C. with High and Low levels of S.R.

There is no significant difference in the O.A. of P.S.C. with Moderate and Low levels of S.R.

b) There is a significant difference in the O.A. of P.S.C at 0.05 level with High and Moderate levels of M.S.

There is a significant difference in the O.A. of P.S.C. with High and Low levels of M.S.

There is no significant difference in the O.A. of P.S.C. with Moderate and Low levels of M.S.

c) There is a significant difference in the O.A. of P.S.C. with High and Moderate levels of C.S.

There is a significant difference in the O.A. of P.S.C. with High and Low levels of C.S.

There is no significant difference in the O.A. of P.S.C. with Moderate and Low levels of C.S.

d) There is a significant difference in the O.A. of P.S.C at 0.05 level with High and Moderate levels of P.S.

There is a significant difference in the O.A. of

P.S.C. with High and Low levels of P.S.

There is no significant difference in the O.A. of P.S.C. with Moderate and Low levels of P.S.

e) There is a significant difference in the O.A. of P.S.C. with High and Moderate levels of C.E.L.

There is a significant difference in the O.A. of P.S.C. with High and Low levels of C.E.L.

There is no significant difference in the O.A. of P.S.C. with Moderate and Low levels of C.E.L.

Even with O.A. it can be observed that the scores are high of children with high scores in Scholastic Readiness. High scores in O.A. are also seen of children of with high scores in the components of Scholastic Readiness. It may be concluded that if the level of Scholastic Readiness is high the Other Activities scores are more favourable.

F. 1) There is a significant, positive but low relationship between S.R. of P.S.C. and T.R. on S.A.

2) There is a significant, positive but negligible relationship between S.R. of P.S.C. and T.R. on P.D.

3) There is a positive, significant but low relationship between S.R. of P.S.C. and T.R. on M.A.

4) There is a low but positive and significant relationship between S.R. of P.S.C. and T.R. on S.S.

5) There is a significant positive but low relationship between S.R. of P.S.C. and T.R. on P.T.

6) There is a significant positive but low relationship between S.R. of P.S.C. and T.R. on K.E.

It can be concluded from these findings that there is a positive and significant though low relationship between T.R. on S.A. and S.R. of P.S.C. All the components of S.A. also seem to be positively related to S.R. though in varying degrees. The highest relationship can be derived between S.R. and T.R. on P.T. and the lowest between S.R. and T.R. on P.D.

This has significant implications in evaluating the readiness of the child. If the S.R. device is not feasible to be used by the teacher due to lack of time, personnel, space and so on, she may perhaps continue with her "Rating Scale" carefully to note down the observations about the child's capacities and potentials and design sessions to enhance the aspects that need support and guidance.

G. 1) There is a significant difference in the S.R. of P.S.C. with High and Moderate levels of P.E.

There is a significant difference in the S.R. of

P.S.C. with High and Low levels of P.E.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of P.E.

2) There is a significant difference in the S.R. of P.S.C. with High and Moderate levels of M.E.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of M.E.

There is a significant difference in the S.R. of P.S.C at 0.05 level with Moderate and Low levels of M.E.

3) There is a significant difference in the S.R. of P.S.C. at 0.05 level with High and Moderate levels of F.E.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of F.E.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of F.E.

4) There is a significant difference in the S.R. of P.S.C. at 0.05 level with High and Moderate levels of M.O.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of M.O.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of M.O.

5) There is a significant difference in the S.R. of P.S.C. with Very High and High levels of F.O.

There is a significant difference in the S.R. of P.S.C. with Very High and Moderate levels of F.O.

There is a significant difference in the S.R. of P.S.C. with Very High and Low levels of F.O.

There is a significant difference in the S.R. of P.S.C. with Very High and Very Low levels of F.O.

There is a significant difference in the S.R. of P.S.C. with High and Moderate levels of F.O.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of F.O.

There is a significant difference in the S.R. of P.S.C. with High and Very Low levels of F.O.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of F.O.

There is no significant difference in the S.R. of P.S.C. with Moderate and Very Low levels of F.O.

There is no significant difference in the S.R. of P.S.C. with Low and Very Low levels of F.O.

6) There is no significant difference in the S.R. of P.S.C. with Low and Moderate levels of S.E.S.

There is a significant difference in the S.R. of P.S.C. with Low and High levels of S.E.S.

There is a significant difference in the S.R. of P.S.C. with Low and Very High levels of S.E.S.

There is a significant difference in the S.R. of P.S.C. with Moderate and High levels of S.E.S.

There is a significant difference in the S.R. of P.S.C. with Moderate and Very High levels of S.E.S.

There is no significant difference in the S.R. of P.S.C. with High and Very High levels of S.E.S.

7) There is no significant difference in the S.R. of P.S.C. with only child and one sibling.

There is a significant difference in the S.R. of P.S.C. with only child and two siblings.

There is a significant difference in the S.R. of P.S.C. with only child and three and above siblings.

There is a significant difference in the S.R. of P.S.C. at 0.05 level with one sibling and two siblings.

There is a significant difference in the S.R. of P.S.C. with one sibling and three and above siblings.

There is a significant difference in the S.R. of

P.S.C. with two siblings and three and above siblings.

8) There is no significant difference in the S.R. of P.S.C. of Sion and Matunga R.A.

There is no significant difference in the S.R. of P.S.C. of Sion and Kolivada R.A.

There is a significant difference in the S.R. of P.S.C. of Sion and Dharavi R.A.

There is no significant difference in the S.R. of P.S.C. of Matunga and Kolivada R.A.

There is a significant difference in the S.R. of P.S.C. of Matunga and Dharavi R.A.

There is no significant difference in the S.R. of P.S.C. of Kolivada and Dharavi R.A.

The findings very clearly reveal that Home background is an important factor influencing S.R. of P.S.C. The better the Home Background higher are the S.R. scores and vice versa. Each of the components of Home Background seem to constitute significantly to the S.R. scores. There is a significant difference consistently on the S.R. scores of students from High and Moderate Home Background and High and Low Home Background. With the Moderate and Low, there is no significant difference in S.R. scores excepting in Mother's

education.   This   means   that   Mother's   education   is   of
importance for the development of the S.R. of the   pre-school
child.

H.   1) There   is   a significant difference in   the   S.R.   of
        P.S.C. with High and Moderate levels of P.I.

        There   is   a significant   difference in the   S.R.   of
        P.S.C. with High and Low levels of P.I.

        There is no significant difference in the S.R. of P.S.C
        at 0.05 level with Moderate and Low levels of P.I.

     2) There is a significant difference in the S.R. of P.S.C
        at 0.05 level with High and Moderate levels of A.C.R.

        There   is   a significant   difference in the   S.R.   of
        P.S.C. with High and Low levels of A.C.R.

        There   is   no significant difference in the   S.R.   of
        P.S.C. with Moderate and Low levels of A.C.R.

     3) There   is   a significant difference in   the   S.R.   of
        P.S.C. with High and Moderate levels of A.H.

        There   is   a significant   difference in the   S.R.   of
        P.S.C. with High and Low levels of A.H.

        There   is   no significant difference in the   S.R.   of
        P.S.C. with Moderate and Low levels of A.H.

4 there is a significant difference in the S.R. of P.S.C at 0.05 level with High and Moderate levels of P.E.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of P.E.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of P.E.

5) There is a significant difference in the S.R. of P.S.C. with High and Moderate levels of I.P.R.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of I.P.R.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of I.P.R.

6) There is a significant difference in the S.R. of P.S.C. with High and Moderate levels of F.P.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of F.P.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of F.P.

7) There is a significant difference in the S.R. of P.S.C. with High and Moderate levels of P.C.

There is a significant difference in the S.R. of P.S.C. with High and Low levels of P.C.

There is no significant difference in the S.R. of P.S.C. with Moderate and Low levels of P.C.

From these findings it can be concluded that P.I. and its components are an important factor influencing the S.R. scores. Children score high on S.R. whose parents have scored high on P.I. The difference is consistently significant with High and Low P.I., followed by High and Moderate groups. On the whole, though the Moderate and Low groups differ significantly in S.R. scores, on the components individually there is no significant difference.

i   1) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of P.I.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of P.I.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of P.I.

2) There is a significant difference in the A.A. of P.S.C at 0.05 level with High and Moderate levels of A.C.R.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of A.C.R.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of A.C.R.

3) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of A.H.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of A.H.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of A.H.

4) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of E.P.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of E.P.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of E.P.

5) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of I.P.R.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of I.P.R.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of I.P.R.

6) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of F.P.

There is a significant difference in the A.A. of

P.S.C. with High and Low levels of F.P.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of F.P.

7) There is a significant difference in the A.A. of P.S.C. with High and Moderate levels of P.C.

There is a significant difference in the A.A. of P.S.C. with High and Low levels of P.C.

There is no significant difference in the A.A. of P.S.C. with Moderate and Low levels of P.C.

On the basis of these findings it can be concluded that P.I. and its components are an important factor influencing the A.A. scores. High scores in P.I. obtained by parents is a determinant for obtaining High scores in A.A. The difference is significant constantly with High and Low P.I. categories. The High and Moderate categories in P.I. also differ significantly excepting in A.C.R. where the difference is at 0.05 level only. There is no significant difference in any of the components with the Moderate and Low categories. Thus Parental Involvement (P.I.) is of importance for favourable A.A. scores.

Parental Interest (P.Int.) was the next variable considered for testing the differences in A.A. and S.R.

P.Int was formulated on the basis of response of parents for the interview. There were four categories available on the basis of attending the interview.

Both Parents who came.

Only Mothers who came.

Only Fathers who came.

Non Respondents.

The S.R. and A.A. scores were arranged in these category-wise and the ANOVA was computed the findings of which are —

I. 1) There is a significant difference in the S.R. of P.S.C. with Father's and Mother's P.Int.

There is a significant difference in the S.R. of P.S.C. with Father's and Both Parents P.Int.

There is a significant difference in the S.R. of P.S.C. with Father's and Non Respondents.

There is no significant difference in the S.R. of P.S.C. with Mother's and Both Parents P.Int.

There is a significant difference in the S.R. of P.S.C. with Mother's and Non Respondents.

There is a significant difference in the S.R. of P.S.C. with Both Parents and Non Respondents.

2) There is a significant difference in the A.A. of

P.S.C. with Father's and Mother's P.Int.

There is a significant difference in the A.A. of P.S.C. with Father's and Both Parents P.Int.

There is no significant difference in the A.A. of P.S.C. with Father's and Non Respondents.

There is no significant difference in the A.A. of P.S.C. with Mother's and Both Parents P.Int.

There is a significant difference in the A.A. of P.S.C. with Mother's and Non Respondents.

There is a significant difference in the A.A. of P.S.C. with Both Parents and Non Respondents.

The findings reveal that Parental Interest is an important factor influencing both S.R. and A.A. of P.S.C. The Non Respondent's children differ significantly from children whose Both Parents or only Mothers attended the interview. The mean score of S.R. of children of the Non Respondents is also the least, compared to all other three categories. The scores of S.R. and A.A. of children whose Father's only attended seem to differ significantly from Mother's and Both Parents perhaps because even though they did show interest and attend the interview, due to lack of time they are unable to provide the necessary stimulation and motivation for the child's progress in the day to day activities. The scores of children whose mother's only

responded do not seem to differ from the 'Both Parents'
category perhaps because the child's caring and rearing is
predominantly taken care of by Mother's and the child
progresses equally well with her nurturance. Most of the
fathers who came alone expressed the inability of their wives
to respond to the interview because of language problem or
lack of education or exposure, excepting a few who could not
come either due to illness or neonate in the home. With this
kind of background it is but obvious that the mother who is
with the child for long hours lacks the necessary capacities
for appropriate nurturance and stimulation.

Summary of Findings & Suggestions

Following findings can be summarized from the study :

1) Scholastic Readiness of the child is positively though
   moderately related to the Academic Achievement of the
   child. By helping the child develop the necessary
   readiness to take up tasks revolving around scholastic
   abilities, the child's performance in the 'Academic' field
   can be enhanced. Thus every effort must be made to
   develop and strengthen the S.R. of P.S.C.

2) As for the components of Scholastic Readiness, though all
   are positively related to Academic Achievement in varying
   degrees the "Comprehension of English Language" is
   significantly and substantially correlated. This means

that efforts must be in the direction of language development and understanding of English. Since the schools follow English as the medium of instruction it is important that children who do not have exposure to the language have special sessions designed to be organised informally.

3) The study reveals that the relationship of Scholastic Readiness and Academic Achievement gradually decreased and by the end of the year is low. This is a heart warming indication as the children who are not ready can be taken up for enrichment programmes and their readiness can be strengthened faster. In this regard the Scholastic Readiness tool may be useful in specifically identifying which aspect of Scholastic Readiness is lacking in the child and efforts be made in that direction.

4) The study indicates that there is no difference in both Scholastic Readiness and Academic Achievement of boys and girls. This means that sex is not a contributing factor as far as Scholastic Readiness or Academic Achievement is concerned. But as far as Scholastic Readiness scores are concerned boys consistently score higher than the girls on the mean scores and as far as Academic Achievement scores are concerned the girls fair slightly better on the mean scores than the boys.

5) Home Background seems to be an important factor

influencing Scholastic Readiness and it goes without saying that children from the disadvantaged homes must be taken up for "Compensatory programmes" on the lines of "Head Start" and "Seasame Street" programmes already popular abroad. Special sessions need to be designed and devised side by side in the schools to cater to the stimulation and motivation of cognitive skills and language growth.

6) Parental Involvement which has emerged as an important factor influencing Scholastic Readiness and Academic Achievement significantly needs to be encouraged. It must be mandatory for every school to organise parent education programmes to make parents aware of the importance of their involvement and interest in children. This could favourably enhance the child's capabilities for high scores in both Scholastic Readiness and Academic Achievement.

Conclusions and Discussions

Scholastic Readiness is an important factor influencing Academic Achievement of Preschool childen. There is a moderate relationship between the two. This means that it is very important to develop the Scholastic Readiness of children. Appropriate enrichment programmes to develop the readiness in children who lack must be devised. Care must be

taken to keep the needs and background of the child while designing the sessions so that they are meaningful. In this context the Scholastic Readiness screening device could be made use of which has been prepared for the research. This would not only help in identifying children who are not ready but also in pinpointing the specific aspects in which they need help. Since the Scholastic Readiness tool has subcategories on Motor skills, Cognitive skills, Psychosocial skills and Language skills it would be possible to work in the special area in which guidance is required for development. The tool should be used very cautiously and discreetly - not to reject or label children as dull, bad or backward but only as an indicator of the child's readiness and a device to help teachers devise complementary enrichment programmes. Use of tool without concern to these aspects could be damaging to the self concept and self esteem of the child and develop a negative attitude in him towards learning[1]. Indiscriminate use of tools and its ill effects have been the concern of early childhood educators[2]. The screening could be a continuous one and not just a once a year kind of phenomenon. At regular intervals subtle use of the tool would enable the teachers to specifically identify

[1] T.N. Kaul V. : Background Paper - Paper presented at the O.M.E.P. Regional Seminar in Early Childhood Education. Nov. 1991.

[2] Kumar R. : Alternatives to Admission Tests and Formal Curriculum. Paper presented at the O.M.E.P. Regional Semihar in early childhood Education. Nov. 1991.

the requirements and set goals in school programmes.

It is heartening to observe that the relationship of Scholastic Readiness and Academic Achievement, however, decreases with time. The correlation which is high at the 1st Unit test-time, gradually decreases to low by the 2nd Semester exam. But, then again, the defeatism that might have crept in because of the need to struggle to cope with the school demands, in the children who lacked readiness needs to be considered. In this context then it becomes evident that Scholastic Readiness must be developed in pre school children to help them cope with the expectations and meet the demands of the school. Efforts must be directed in the development of each of the area viz. motor, cognitive, psychosocial and language.

The teaching strategy at this stage needs to be reviewed where in it is not going to be the routine, mundane ways of teaching and the syllabus and curriculum is predicted but one where the assessment of the group in general and the individual in particular are done and the programme built on these needs. This would automatically help children grow and develop their readiness for various school tasks. All the same it should not be that if the child is not ready, one waits till he is ready, but, devise sessions for development of his readiness. At the same time continuous monitoring of the readiness of the group and enrichment programmes for

enhancement is of paramount importance .

Since the scores of Academic Achievement of children with low Scholastic Readiness are also low, continuous offering of compensatory programmes are necessary to compensate for the lack of aspects, that would develop readiness in them.

The study concludes that Home Background (H.B.) is an important factor contributing to the Scholastic Readiness of children. There is a significant difference in the Scholastic Readiness of children from different H.B. This implies that children coming from backgrounds which are not conducive to the development of Scholastic Readiness need special attention. Since there is little chance of bringing about changes in the H.B. it is essential that the child may be attended in the area and necessary help rendered. Appropriate compensatory programmes prepared on the lines of Head Start would be of enormous help.

Parental Involvement has a high bearing on the Scholastic Readiness of Pre-school children. The higher the P.I. higher is the Scholastic Readiness and vice versa. This implies that P.I. is an important indicator of Scholastic Readiness and every parent must be made aware of the importance of P.I. This can be done by organising regular

contact programmes of various kinds like Discussion group, individual conferences, Group conferences, Panel discussions, Parent education seminars and so on. These contacts would enlighten parents on their role and it's influence on child's development.

Parents must be encouraged to develop close interpersonal relations with the child, motivating and stimulating his potentials and nurturing his curiosity and inquisitiveness. This would enable them to be efficient parents and influence the child in the right direction.

Parental Involvement also has a great bearing on the Academic Achievement of pre-school children. There is a significant difference in the Academic Achievement of children with different levels of P.I.. Every component of P.I. that is the Attitude to Child Rearing (A.C.R.), Actual Handling (A.H.), Interpersonal Relations (I.P.R.), Expectations of Parents (E.P.), Facilities Provided (F.P.) and Preparation of the Child (P.C.) is all significantly contributing to the Academic Achievement of pre-school children. It becomes imperative then that extension and expansion programmes apart from school routine (both for children and parents) to compensate for the snags in the environment be organised which would take care of difficulties posed by pre-school children.

Suggestions for Further Study

As studies on young children and in the field of "Early Childhood Education" are very few in India it is almost a neglected area. There is a strong need for more research particularly related to the Indian context.

1) It would be beneficial to study developmental traits of young children from different backgrounds. This would have far-reaching benefits in curriculum planning and preparing compensatory and enrichment programmes.

2) A comparative study could be undertaken on pre-school children from different backgrounds.

3) Longitudinal studies are necessary to find out the long term effects of Scholastic Readiness, whether it has any bearing on the child's school performance even after two or three years. The study could also probe into the influence of Scholastic Readiness on the child's Self Concept, personality characteristics, emotional development and so on.

4) Parental Involvement being identified as an important factor contributing to the Scholastic Readiness, there is need to study the ways and means of encouraging P.I. and getting them to nurture their children.

5) Better teaching methods to accommodate children from different levels need to be looked into since the method used could be an effective medium to enhance readiness in children.

6) Comparative studies are essential in the field of "Compensatory Education" with special reference to disadvantaged children in the urban and rural settings.

7) Indigenous instructional materials need to be devised which would be extremely beneficial in conducting the enrichment and compensatory programmes.

GENERAL SUGGESTIONS

The evidence from the study indicates that the differences exist in A.A. of children with different levels of S.R. The study has also identified general aspects of the home which contribute to the child's "Readiness" and his learning in school. The child comes equipped with the "Readiness" from home and hence efforts must be taken to help the child develop the necessary S.R. at home.

H.B. & H.E. have been found to significantly contribute to the S.R. and influence the A.A. of the child. The child who comes to school with an educational and cognitive deficit is handicapped to take on school tasks.

This is mainly because of lack of stimulation, he has not been sufficiently exposed to "benificial" stimuli at home to provide adequate background for school experiences.

The first and most popular explanation of why certain children fail to achieve in school is that thay suffer a deficiency of school related experiences.[1] Such children have not been adequately exposed to the beneficial stimulation and care that build the basis for A.A. in our school system.

Institutions involved in early childhood education must assume responsibilities to provide improved educational opportunities for children who are not ready.

There is a strong evidence from the evaluation of enrichment and compensatory programmes that parents particularly mothers can be taught to be effective teachers of their children and that their teaching efforts can benefit childrens developing skills.[2] Early childhood educators have a big job ahead of them. They must determine what role

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1   Hess, R.D., Croft, D.J. : Teachers of Young Children. Boston. Houghton Mifflin & Co., 1972 pp. 134 - 137.

2   Nir-Janiv, N., Spodek, B., Steg, D.: Early Childhood Education - An International Perspective. New York. Plenum Pub. Corp. 1982. pp. 188 - 190.

they have in the early experience of children and help
parents to identify and select the goals in this sphere more
confidently.

        Hence   to promote readiness   in   pre-school
children the stratergies to be adopted should be

a)   Changing the environment for the child at home   through
      parent education programmes and creating an awareness in
      parents of their crucial role in stimulating   and
      motivating the child to develop readiness.

b)   Providing educational experiences in school in   a   more
      effective   way through enrichment and   compensatory
      programmes.

..   Community   awareness and creating a climate   where
      necessary appropriate emphasis to pre-school   education
      is given.

        Perhaps the most important rationale for the
involvement of parents lies in the fact that they are
critical influences in the early education of the young
child, even when they themselves are not highly educated.[1]   A
child s early educational development gains from parental

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1   Hess, R.D., Croft, D.J. t Teachers of Young Children.
     Boston. Houghton Mifflin & Co., 1975 p. 79.

support and participation in the educational process. The pre school years are normally in the time when the child develops educability, i.e. a readiness and a capability to learn from a formal institution such as the school. A child can be taught skills and attitudes which will prepare him to perform more successfully in school. Parents can provide the necessary orientation towards the school.

Infact recent emphasis is being placed on infancy as the prime time to establish a base for later learning in the specific skills and concepts. If parent education programmes are methodically organised right from pre-natal and ante-natal clinics in making parents realise their paramount influence on their children, spectacular success can be achieved i.e. the readiness of child in various aspects.

BIBLIOGRAPHY

Aggrawal, J.C.
          Development and Planning of Modern Education.
          New Delhi. Vikas Publishing House, 1982.

Anastassi, A.
          Psychological Testing. New York MacMillan Co.
          1954.

Arora, G.L.
          Curriculum and Quality in Education. New Delhi,
          NCERT, 1988.

Bannerjee, B.N.
          Education Cannot Wait - A Critical study of the
          New Education Policy. New Delhi, B.R. Publishing
          Corp. 1990.

Bannerjee, G.D.
          Handbook of Education. New Delhi. Cosmos
          Publications. 1989.

Bee, H.
          The Developing Child. New York. Harper & Row.
          1981.

Dest, J.W.
          Research in India. 5th Edition. New Delhi.
          Prentice Hall of India Pvt. Ltd. 1986.

Bevli, U.K.
          The Growth of Logical Thinking in Children. New
          Delhi. NCERT. 1990.

Bhalla, M.M.
          Studies in Child Care. New Delhi. NIPCCD. 1985.

Bhattacharya, S.
          Psychology of Child Development. New Delhi.
          Sterling Publishers. 1985.

Bloom, B.
 Stability & Change in Human Characteristics. New
 York. Wiley. 1964.

Bloom, S. and others.
 Compensatory Education for Cultural Deprivation.
 New York. Holt, Rinehart, Winston. 1965.

Borg, W.R., Gall, M.D.
 Educational Research (An Introduction). New
 York. Longman Inc. 1963.

Brisbane, H.E., Riker, A.P.
 The Developing Child. Peoria, Illinois. Chas A.
 Bennett Co. Inc. 1971.

Bruner, J.
 The Process of Education. Cambridge. Harward
 University Press. 1966.

Buch, M.B. [Ed]
 Survey of Research in Education. Baroda. C.A.S.E.
 1974.

Buch, M.B. [Ed]
 Second Survey of Research in Education. Baroda.
 C.A.S.E. Modern Printers. 1979.

Buch, M.B. [Ed]
 Third Survey of Research in Education. New
 Delhi. NCERT. 1991.

Buch, M.B. [Ed]
 Fourth Survey of Research in Education. New
 Delhi. NCERT. 1991.

Buros, K.
 Tests in Print II. New Jersey. The Gryphon
 Press. 1974.

Buros, K.
 The Eighth Mental Measurement Yearbook. (Vol I &
 II). New Jersey. The Gnyphon Press. 1978.

769

Calidvell, M.B., Riccinti, N.
Review of Child Development Research. (Vol III).
The University of Chicago Press. 1973.

Cates, W.M.
A Practical Guide to Educational Research. New
Jersery. Prentice Hall Inc. Englewood Cliffs.
1985.

Chatterjee, Bisva B.
The Effect of Environmental process Variable on
School Achievement. New Delhi. NCERT. 1983.

Chowdhary, D.P.
Child Welfare Development. New Delhi. Atma Ram
& Sons. 1980.

Church, J.
Understanding Your Child From Birth to Three.
New York. Random House. 1971.

Cronback, L.K.
Essentials of Psychological Testing. New York.
Harper & Row. 1960.

Cross, T., Riach, L.
Aspects of Child Development. Victoria.
Australasian Educational Press Pvt. Ltd. 1986.

Dave, A.
Pre-Mathematics Experience For Young Children.
Baroda. I.A.P.E. 1987.

Deo, P. (Ed)
Educational Research in University of Bombay.
Dept. of Education. 1981.

Devadas, R.P., Jaya, N.
A Textbook on Child Development. New Delhi.
MacMillan Ltd. 1984.

Edwards, A.L.
Statistical Methods. 3rd Edition. New York.
Holt, Rinehart, Winston Inc. 1973.

Eliason, C.L., Jenkins, L.T.
A Practical Guide to Early Childhood Curriculum.
Columbu. Merrill Pub. Co., (4th Ed.). 1990.

Entwistle, N.J.
Handbook of Educational Ideas and Practices.
Noel James. 1990.

Gagne, R.M.
Conditions of Learning. New York. Rinehart &
Winston Inc. 1965.

Garge, N.L.
Handbook of Research on Teaching. Chicago. Rand
McNally & Co. 1964.

Garrett, N.L.
Statistics in Psychology and Education. New
York. David McKay Co. 1973.

Ghosh, S.
You and Your Child. New Delhi. Voluntary Health
Association. 1989.

Glasser, W.
Schools Without Failure. New York. Harper
Publishers. 1964.

Green, M.M., Woods, L.E.
A Nursery School Handbook for Teachers and
Parents. Delhi. Universal Road House. 1969.

Grewal, J.S.
Early Childhood Education - Foundations and
Practice. Agra. National Psychological Corp. 1984.

Guilford, J.P.
Psychometric Methods. 2nd Edition. New York.
McGraw Hill. 1954.

Guilford, J.P., Fruchter, B.
Fundamental Statistics in Psychology and
Education. Singapore. McGraw Hill International
Book Company. 1981.

Gupte, S.
    Speaking of Child Care. New Delhi. Sterling
    Publishers Pvt. Ltd. 1991.

Heron, A.
    Planning Early Childhood Care and Education in
    Developing Countries. Paris UNESCO. International
    Institute for Educational Planning. 1979.

Hess, R.D., Croft, D.J.
    Teachers of Young Children. New York. Houghton
    Higglin Co. 1972.

Hetherington, E.M., Parke, R.D.
    Contemporary Readings in Child Psychology. New
    York. McGraw Hill Book Co. 1977.

Hilderbrand, U.
    Introduction to Early Childhood Education. New
    York. MacMillan Publishing Co. Inc. 1976.

Hopkins, K.D., Stanley, J.C.
    Educational and Psychological Measurement and
    Evaluation. New Jersey. Prentice Hall Inc. 1981.

Hunt, J.M.
    Intelligence and Experience. New York. The
    Ronald Press Co. 1961.

Hurlock, E.B.
    Developmental Psychology : A Life Span Approach.
    New Delhi. Tata McGraw Hill. 1990.

Hurlock, E.B.
    Child Growth and Development. New Delhi. Tata
    McGraw Hill Publishing Co. Ltd. 1989.

Hurlock, E.B.
    Child Development. Auckland. McGraw Hill Co.
    1987.

Hymes, J.l.
    Three to Six - Your Child Statrs to School. New
    York. Public affairs Committee Inc. 1960.

I.A.P.E.
The Child and the Community - some Studies and Experiments in Working with Young Children. New Delhi. I.A.P.E. 1977.

I.C.S.S.R.
A Survey of Research in Psychology. Part I. Bombay. Popular Prakashan. 1980.

I.C.S.S.R.
A Survey of Research in Psychology. Part II. Bombay. Popular Prakashan. 1980.

Indian Council of Medical Research
Studies of Preschool Children. New Delhi. I.C.M.R. 1986.

Jayalakshmi, S.
Children and Music. Coimbatore. I.A.P.E. 1987.

Jayalakshmi, S.
Know Your Child. Coimbatore. I.A.P.E. 1986.

Joosten, A.M., Swamy,, S.R.
Helping One Helping All. Vol. I. Indian Montessori Training Courses. 1985.

Joosten, A.M., Swamy,, S.R.
Helping One Helping All. Vol. II. Indian Montessori Training Courses. 1985.

Karmel, I.J., Karmel, M.O.
Measurement and Evaluation in Schools. 2nd Edition New York. MacMillan Publishing Co. Inc. 1978.

Kaul, V.
Motor Skills and their Development. New Delhi. NCERT. 1984.

Kaur, K.
Education in India 1781 - 1985. Policies. Planning and Implementation. Chandigarh. CRRID 1985.

Khandekar, M.
    "The Disadvantaged Pre-Schoolers in Greater
    Bombay", In M.B. Buch [Ed] Second Survey of
    Education. 1979. p. 105.

Khim, M.O.
    "Nursery Schools and Day Nurseries in Rangoon".
    TISS. 1957.

Kohn M.
    Social Competence Symptoms and Under Achievement
    in Childhood. A Longitudinal Perspective. New
    York. John Wiley & Sons.

Kohn R.
    The Exploring Child. Hyderabad. Orient Longman. 1972.

Koshy M
    Talks to Teachers. New Delhi. NCERT. 1991.

Krishna Kumar
    The Child s Language and the Teacher. New Delhi.
    UNICEF Publications. 1986.

Kumar R.
    Child Development in India. Vol I. New Delhi.
    Ashish Publishing House. 1988.

Kuppuswamy B.
    Child Behaviour and Development. New York.
    Vikas Publishing House. 1980.

Leeper, S.N., Witherspoon, R.L., Day, B.
    Good Schools for Young Children. New York.
    Macmillan Publishing Co. (5th Ed.) 1984.

Lichestein, R., Ireton, H.
    Preschool Screening. Florida. Grune & Shatton.
    1984.

Lulla, B.P.
    National Policy on Education. Bombay. Bombay
    Institute of Education. 1986.

Lulla, B.P.
Programme of Early Childhood Education. Bombay.
Bombay Institute of Education. 1982.

Mayhew, A., James H.D.
Development of Educational System in India. New
Delhi. Deep & Deep Publications. 1988.

Mistry, V.R. [Ed]
Early Childhood Education & Child Welfare. Vol
II. Compendium of Researches. Department of
C.D. M.S.U. Baroda. 1985.

Morrison G.S.
Education and Development of Infants, Toddlers
and Preschoolers. Glenview, Scott Jonesman & Co.
1988.

Muralidharan R.
Let Preschoolers Play. E.C.E. Instructional
Material Series - 2. New Delhi. NCERT.

Muralidharan, R.
A Comparison of Developmental Norms. New Delhi.
NCERT. 1988.

Muralidharan, R.
Developmental Norms of Indian Children. Part II.
New Delhi. NCERT. 1983.

Muralidharan, R., Bannerjee, U.
A Guide for Nursery School Teachers. New Delhi.
NCERT 1984.

Mussen, P.H., Comger, J.J., Kagan, J.
Child Development and Personality. New York.
Harper & Row. 1979.

Naik J.P.
Main Reccomendations of Education Commission.
New Delhi. NCERT. 1969.

Nayana Tara S., Ramkumar V.
Integrated Child Development Services - An
Evaluation. New Delhi. Ashish Pub. House. 1988.

NCERT

A Project Integrated Education for Disabled. New
Delhi. NCERT 1987

NCERT

Inservice Teacher Education Package. New Delhi.
NCERT 1988.

NIPCCD
Facets of Child Development. New Delhi. NIPCCD.
1979.

Nir-Janiv, N., Spoolek, B., Steg, D.
Early Childhood Education - An International
Perspective. New York. Plenum Press. 1982.

Nitko, J.
An Introduction to Educational Tests and
Measurement. New York. Harcourt, Brace
Jovanovich Inc. 1983.

Papalia, D.E., Olds, S.W.
A Child's World - Infancy through Adolescence.
New York. McGraw Hill Book Co. 1979.

Peshawaria R.
Managing Behaviour Problems in Children - A Guide
for Parents. New Delhi. Vikas Publishing House
Pvt. Ltd. 1990.

Rajgopal, V., Narayana, J.
Here we Play. Coimbatore. I.E.A.P. 1987.

Rajguru, M.S., Dandekar, W.N.
An Introduction to Psychological Testing and
Statistics. 1st Ed Bombay. Sheth Publishing Co.
1988.

Rao, V.S.
Exceptional Children - Their Psychology and
Education. New Delhi. Somaiya Pub. Pvt. Ltd. 1987.

Rowntree D.
Assessing Students. How Shall We Know Them?
London. Harper & Row Publishers. 1977.

Salamatullah
Teacher and Education in the Emerging Indian
Society. New Delhi. NCERT 1988.

Sampath, K., Panneersehan A., Santhanam S.
Introduction to Educational Technology. New
Delhi. Sterling Publishers Pvt. Ltd. 1984.

Saraswathi, T.S.
Human Development, Marriage and Family Relations.
(Vol. I), Compendium of Research - 1961-1981.
Dept, of C.D. M.S.U. Baroda. 1982.

Savarirayan, S.
Child Development. Bombay. Sheth Publishers. 1991.

Seetharamu, A.S.
Philosophers of Education. New Delhi. Ashish
Publishing House. 1989.

Shah, C.K.
Personality Development of Children. Bombay.
Multitech Publishing Co. 1982.

Shankar, U.
Philosophy of Education for Modern India. New
Delhi. Enkay Publishers Pvt. Ltd. 1992.

Sharma, A.
Social and Personal Development of the Young
Child. New Delhi. NCERT 1985.

Sharma, P., Gairola, L.
Fundamentals of Child Development and Child Care.
New Delhi. Sterling Publishers Pvt. Ltd. 1990.

Shrivastava, A.P.
The Educational Development of your Child. New
Delhi. The Learning Laboratory. 1982.

Shukla, P.
"Development of Psychological Space Perception in
Children". In M.B. Buch Third Survey of Research
in Education. 1987. pp. 416 - 417.

Sidhu K.S.
Methodology of Research in Education. New Delhi.
Sterling Publishers. 1985.

Singh I.C.
Teacher Education in India. New Delhi. NCERT 1990.

Singh P.
Evaluation at the Elementary Stage. New Delhi.
NCERT 1986.

Staint M.A.
The Young Child - His Activities and Materials.
New Jersey. Prentice Hall. 1972.

Stanger R.C.
The Teaching of Reading. UNESCO Paris. GINN & Co.
1973.

Swaminathan I.
Developing Creativity in Young Children. New
Delhi. NCERT 1986.

Taneja V.R.
Educational Thought and Practice. New Delhi.
Sterling Publishers. 1990.

Taneja V.R., Taneja S.
Educational Thinkers. New Delhi. Atlantic
Publishers and Distributors. 1989.

Taraporewala R., Chugani N.
A Handbook for Preschool Teachers. Bombay.
Popular Prakashan. 1980.

Thakkar A.
"Curriculum in Pre-School Education". In M.B.
Buch [Ed] Third Survey of Research in Education.
1987. p. 569.

Thirtha N.V., Sreelakshmi
The Effect of Environment Variable on School
Achievement. New Delhi. NCERT 1982.

Troners R.M.W.
An Introduction to Educational Research. 4th
Edition. New York. MacMillan Publishing Co. 1978.

Tuckmann B.W.
Conducting Educational Research. 2nd Edition.
New York. Harcourt, Brace Janovich Inc. 1978.

Vagh A.
Parent and Community Participation in the
Preschool Programme. New Delhi. NCERT 1984.

Voluntary Health Association
Better Child Care. New Delhi. V.H.A. 1991.

Wadhwani M.R., D'souza A.L.
Elements of Social and Economic Life in India.
Bangalore. Sheth Publishers. 1983.

Wadkar A.J.
Role of Home Background in Academic Achievement.
Pune. Dastane Ramachandra & Co. 1989.

Walter J., Tandon R.
Participatory Research and Evaluation. New
Delhi. India Social Institute. 1986.

Watson R.I., Lindgren H.C.
Psychology of the Child and the Adolescent.
New York. MacMillan Publishing Co. Inc. 1979.

Whipple G.M.
The Thirty Fourth Yearbook of National
Society for the Study of Education.
Educational Diagnosis. Chicago Illinois. 1954.

ARTICLES FROM JOURNALS

Ajeh A.O.
"The Home Effects on Academic Achievement". New
Frontiers in Education. Vol XXI No.3, July –
Sept. 1991. pp.380-388.

Anderson B.E.
"Effects of Day – Care on Cognitive and Socio-
emotional Competence of 13 yrs old Swedish School
Children". Child Development. Vol 63, No.1,
Feb. 1992. pp. 20-35.

Ausubel P.P.
"Viewpoints from Related Disciplines Human Growth and Development". Teachers College Record. LX 1959.

Ashaiy Mohite P.
"Establishing Norms for the Teacher's Rating Scale". Indian Educational Review, Vol XXIV No.4, Oct. 1989. pp.60-67.

Bisht A.R.
"Instilling Need for A.A. in Students". Educational India. Vol 49. No. 3 & 4, Sept - Oct. 1982. pp. 44-45.

Chandhari V.S., Vaidya S.
"Effect of Mastery Learning Strategy on Achievement, Sex and S.E.S. of Students" - An International Study. The Progress of Education. Vol LXVI, No.7, Feb 1992. pp.153-154.

Crosser I.S.
"Summer Birth Date Children : Kindergarten Entrance Age and Academic Achievement". The Journal of Educational Research. Jan/Feb 1991. Vol 84 No. 3. pp. 140-146.

Datta, V.
"Teacher Effectiveness". In Quest of Bharatiya Shikshan. Vol II, No.4. April 1992.

Devi M.D.
"Integrated Child Development in the Non Formal System of Education". The Progress of Education. Vol LVI, No.6, Jan '82. pp. 143-146.

Idiger Marlow
"Curriculum and Teaching - Some opposing views". New Frontiers in Education. Vol XIV, No.1. Jan-March 1984. pp.59-63.

Eyesenck H.J.
"Personality and School Achievement". Education Today. Vol 40. No. 2 - 1990 pp.3-16.

Gernsbacher M.A., et al
"Investigating Differences in General Comprehension Skill". _Journal of Experimental Psychology_. Learning Memory and Cognition. Vol 16, No. 3, May 1990, pp. 430 - 445.

Gray, S., Klaus, R.A.
"Early Training Project - An Experimental Preschool Programme for Culturally Deprived Children". _Child Development_. 36. 1965.

Joshi A.
"Influence of Treatment, Personality and their Interaction on Achievement". _The Progress of Education_. Vol LXVI, 1, April 1991. pp.15-18.

Joshi A., Mohite P., Verma A.
"The Research Scene in Early Childhood Education in India". _Perspectives in Education_. Vol 7, No.1, 1991, pp.3-13.

Kaile H.S., Sadhar G.
"The Curriculum and the Child". _Education Review_. Vol XCVI - No 8. Aug 1990. pp.121-124.

Kochuthresia V.J.
"Pre-School Education, An Indian Perspective". _Journal of Indian Education_. 1985 11(2).

Kellaghan J.
"Relationship Between Home Environment and Scholastic Behaviour in a Disadvantaged Population". _Journal of Educational Psychology_. 69, 1977. pp.754.

Kumar K.
"What a Child Looks for in Early Learning". _Future_. 22 - 23. 1987-88. pp.35-37.

Knox B.J., Glover J.A.
"A note on pre-school experience effects on Achievement, Readiness and Creativity". _Journal of Genetic Psychology_. 1978, pp.151-152

Lister J.
"What s Big Teacher? Early years". *Education
Today*. Vol 41 No.1, 1991. pp.23-26.

Lumpkins B., Parker F., Hall H.
"Instructional Equity for Low Achievers in
Elementary School Mathematics". *The Journal of
Educational Research*. Jan-Feb 1991 [Vol 84 (No.
3)]. pp. 135-139.

Mallya, I.
Monographs - The Dept of Human Development &
Family Studies. Sr. No.1. 1985.

Muralidharan R., Bannerjee V.
"Effect of Pre-school Education on the Language
and Intellectual Development of Under-previleged
Children". *Journal of Education and Psychology*.
1974. 32(1). pp.6-10.

Muralidharan R.
"Development of Indian Children in India".
Baroda Journal of Nutrition, 9. pp. 336-340.

Ministry of Human Resources Development, Government of
India. Challenge of Education - A Policy Perspective.
New Frontiers in Education. Vol XV, No.4, Oct-Dec 1985.
pp.73 - 107.

McGrowan, R.J., Johnson,A.C.
"The Mother Child Relationship and Other
Antecedents of Childhood Intelligence - A Causal
Analysis". *Child Development*. 55,(3). pp. 810
- 820.

McShane E.A., Jones E.L.
"Modifying the Environment for Children with poor
listening skills". *Academic Therapy*. Vol 25,
No.4. March 1990. pp.439 - 446.

Mohanty J.
"Nation's need, Importance and Objectives of
E.C.E. or Preschool Education". *The Educational
Quarterly*. 1984 XXXVI (4).

Naik C.
"Making Childhood Learning Happier". Future, Development Perspectives on Children. 1987. pp.20, 38-40.

National Council of Jewish Women Research Institute for Innovation in Education : Report on Research and Activities. 1982.

Jakland.
"Prediction Validity of Readiness Tests". Journal of Educational Psychology. Vol. 70. No. IV. pp. 574 - 582.

Pasnak R. et al
Cognitive and Achievement gains for kindergartners Instructed in Piagetian Operation. Journal of Educational Research. Vol 85, No.1, Sept/Oct 91, pp 5 -13.

Safaya R., Nilaya P.
"The New Education Policy in India". The Educational Review. XCII, No.2, Feb 1986. pp 26-27.

Scott R., Kobes D.A.
"The Influence of Family on Learning Readiness Patterns of Socio-economically Disadvantaged Pre-School Blocks". Journal of Clinical Psychology. 1975. Vol.31. pp. 85-88.

Shapiro J.E.
"The Effect of Visual Discrimination Training on Reading Readiness Test Personality of Impulsive 1st Grade Boys". Journal of Educational Research. 1976. Vol.69. pp. 338-340.

Singh H.I.
"Creativity, the Unique Gift to Mankind". The Progress of Education. Vol LXVI, No.9. April 1992. pp.202-205.

Shrivastava V.
"A Study of Effect of Family Environment on Students Achievements". Journal of Psychological Researches. 1991. Vol 36 No.2 pp.87-91.

Smilanski, S.
"Evaluation of 'Early Education'". In
Educational Studies and Documents, UNESCO. 1961.
pp. 3 - 17.

Sood R.
"Academic Achievement in Relation to Adjustment".
Journal of Psychological Researches. Vol.36 No 1.
January 1992. pp.1-4.

Stevenson, W.K., Parker, W.
"Longitudinal Study of Individual Differences in
Cognitive Development and Scholastic
Achievement". Journal of Educational Psychology.
1976. Vol. 68 No.IV pp. 377-400.

Surendran P., Chandy V.
"Play way in Education". Education Review. Vol.
XCV No.1 January 1989. pp.13-15.

Swarup S.
"Personality Characteristics of Under and Over
Achievers". Journal of Psychological Researches.
Vol.33, No.2. 1989. pp.22-31.

Scarr S.
"Developmental Theories for the 1990s". Child
Development. Vol. 63 No.1, Feb 1992, pp.1-17.

Tocci, C.M., Englehard, G.
"Achievement, Parental Support and Gender
Differences in Attitude Towards Mathematics".
Journal of Educational Research. Vol. 84, No.5,
May June, 1991. pp.280 - 285.

Teehan, M. et al
"Strict and Inconsistent Discipline in
Childhood". English Journal of Clinical
Psychology. Vol. 30, Part 4. November, 1991.
pp. 325 - 330.

Venkateswaran S. Sathiyagirirajan
Experiments in Education. Emotional Stability
and Academics. 1986. pp. 51-52.

Venkataraman, K.S.
    "Linguistic Development of Pre-School Children".
    The Educational Review. 1984. Vol. XC (10).

Verma, A. et al
    Monographs - The Dept. of Human Development and
    Family Studies. Sr. no. 1. M.S.U. Baroda.

Vincent, J., Bright, R.L., Dickason J.B.
    "Effects of the WIST Reading Readiness Programme
    on 1st Grade Academic Achievement". Journal of
    Educational Research. 1976. Vol. 69. pp. 250 -
    253.

Walberg, H., Marjoribanks, K.
    Family Environment and Cognitive Development -
    Twelve Analytic Models. Review of Educational
    Research. 1976. Vol. 45 pp. 527 - 552.

Wang, M., Haertel, G.D., Walberg, J.H.
    "What Influences Learning - A Context Analysis
    of Review Literature". The Journal of
    Educational Research. Vol. 84. No.1.   Sept/Oct
    1990. pp.30-39.

Weikart, D.P.
    Perry Pre-school Project Pre-school Intervention
    : A Preliminary Report of the Perry Pre-school
    Project. Ann Arbor Campus Publishers. 1970.

REPORTS AND DOCUMENTS

Bakshi, A., Mistry, V., Mukul, N. (Eds)
    Monographs - The Dept. of Human Development and
    Family Studies. Serial No.5, 1985.

Documents (N.P.E.) : 1986, A Review. Roles Goals and
Values in Education. Vol XXI, No.1, Jan-March 1991.
pp.65-73.

Documents (N.P.E.) : 1986, A Review, Teacher and Student.
Vol XXI, No.4. Oct-Dec 1991. pp.486-546.

785

Deutse, M.
      Institute   for   Developmental   Studies   Annual
      Report. New York Medical College. 1965.

Hess, R.D., Shipman, V.
      "Early   Experience   &   the   Socialization   of
      Cognitive Modes in Children". Child Development.
      1965. 36. pp. 887 - 898.

Kerawalla, G.J. (Ed)
      "Education   of   the   Socially   Disadvantaged".
      Proceedings of the ICSSR Western Regional Centre
      sponsored Seminar Organised by the Dept. of
      Education, University of Bombay. 1984. p. 186.

Ministry of Health and Family Welfare.   Annual Report.
New Delhi. Govt. of India. 1988.

Ministry of Human Resources and Development. Annual
Report. Part I. Department of Education. 1989.

Ministry of Human Resources. Department of Women and
Child Development. Annual Report. Part IV. 1989.

Ministry   of   Education.   Report of the Education
Commission.   Government of India. New Delhi. 1964-66.

Ministry of Human Resources Development. 1.   Programme
of Action. New Delhi - 1986.

Ministry of Human Resources Development. Dept. of Edu.
National Policy of Education. Govt. of India.
Chandigarh, 1986.

Muralidharan R.
      Motor Development of Indian Children Development
      Norms Project 2 1/2 to 5 years. Himeographed
      Report. 1971.

Ministry of Human Resource Development. National Policy
on Education. New Delhi 1986.

Ministry of Education and Social Welfare. - Government of India. National Policy for Children. New Delhi. Jan 1975.

Department of Social Welfare. Government of India. National Policy for Children. Proceedings of the Inaugural Meeting September 15, 1975. New Delhi.

National Council of Education Research Training
All India Education Survey Selected Statistics as on September 1986. New Delhi. 1989.

Report of the Central Advisory Council for Education. Children and their Primary Schools. London. H.M. Stationary Office. 1967.

UNESCO
Report of "Search for Low-cost ECCE Strategies" at 23rd session General Conference. 1986-87.

DICTIONARIES AND ENCYCLOPEDIAS

Barnhart C.L., Barnhart R.K.
The World Book Dictionary. Vol.1. Chicago. Doubleday & Co. Inc. 1987.

Biswas A., Aggarwal J.C.
Encyclopaedic Dictionary & Directory of Education with sp. ref. to India. Vol I. New Delhi. The Academic Pub. India. 1971.

Deighton C.L.
The Encyclopedia of Education. Vol III. New York. The MacMillan Co. 1971.

Dunkin M.J. [Ed.]
The International Encyclopedia of Teaching and Teacher Education. Oxford. Perganan Press. 1987.

Ebel R.L. [Ed]
Encyclopedia of Educational Research. 4th
Edition. London. MacMillan Co. 1969.

Good C.V., Markel W.R. [Ed].
Dictionary of Education. New York. McGraw Hill
Book Co. Inc. 1973.

Hills P.J. [Ed].
A Dictionary of Education. Lon Rontledge and
Kagan Paul. 1982.

Husen T., Postlethwaite N.T.
The International Encyclopedia of Education. Vol
VII. New York. Perganon Press. 1985.

Husen T., Postlethwaite N.T. [Eds]
International Encyclopedia of Education. New
York. Perganon Press. 1985.

Kruskal W.H.
International Encyclopedia of Statistics. Vol I.
New York. The Free Press. 1978.

Mitzel E.H., Best H., Robinowitz W. [Ed]
Encyclopaedia of Educational Research. Vol II &
III. London. Collier MacMillan Publishers.
1982.

Onion C.T.
The Shorter Oxford English Dictionary. Oxford.
The Standard Literature Co. Pvt. Ltd. 1961.

Page G.T., Thomas J.B.
International Dictionary of Education. New York.
Nicholas Publishing Co. 1978.

Rivlin N.H., Schuder [Ed]
Encyclopedia of Modern Education. New York. The
Philosophy Library. 1963.

Rowntree D.
A Dictionary of Education. London. Harper & Row
Publishers. 1981.

788

Shafritz J.M., Koeppe R.P., Seper E.W.
Dictionary on Education. New York. The Facts
on File. 1988.

Smith E.C., Knouse S.W., Atkinson M.M.
The Educator's Encyclopaedia. New Jersey.
Prentice Hall Inc. 1967.

UNPUBLISHED THESIS AND DISERTATIONS

Arunjatai V., Srinivasachari, C.
Functional Vocabulary of Pre-School Children. In
M.B. Buch (ed). Survey of Research in Education.
1974. p.270.

Atre V.V.
A Comparative Study of Marathi Balbharati (Std I)
Vocabulary and the Vocabulary of Pre-School
Children. In M.B.Buch [Ed] Third Survey of
Research in Education. 1986. pp.581-582.

Badami C.H.
"A Study of some aspects of Motor Development
among Pre-school Children". In M.B. Buch [Ed].
Third Survey of Research in Education. New
Delhi. N.C.E.R.T. 1987. p.325.

Bapat B.G.
"An Investigation into the Conditions of Pre-
Primary Education in the Poona University Area
with a view to finding out problems and
suggesting solutions to some of them". In M.B.
Buch [Ed] A Survey of Research in Education.
1974. p. 482.

Bhatia H.R., Tandon R.K., Somvanshi A.K.S., Saxena J.K.
"Construction and Standardisation of Performance
Tests of Intelligence for Ages 3-13 - In M.B.
Buch [Ed]. A Survey of Research in Education.
1974. p.222.

Chatterjee R.G.
     "Development of the Concept of Time in Children".
     In M.B. Buch (Ed) Second Survey of Research in
     Education. 1979. p.174.

Chattopadhyay S.K.
     "The Language Development of Nursery and Primary
     School Children". In M.B. Buch [Ed] Second
     Survey of Research in Education. 1979. p.175.

Deka G.
     Organisation of Pre-Primary Education in Assam.
     In M.B. Buch [Ed]. Third Survey of Research in
     Education. 1987. p.881.

Desai S.H.
     "Construction and Standardisation of Tests of
     Language Development of Gujarati Children of the
     Age Group 3 to 5 In M.B. Buch [Ed] Second Survey
     of Education. 1979. p. 382.

Devi C.L.
     An Analytical Study of Social Development of
     Nursery School Children". In M.B. Buch [Ed].
     Third Survey of Education. 1987. p.345.

Jain S.
     An Experimental Study of the Relationship between
     Home Environment and Scholastic Achievement. In
     M.B. Buch [Ed] A Survey of Research in Education.
     1987. p.330.

John P., Abraham M.A.
     "Study of Under Achievement among College
     Students with a View of Formulating a Guidance
     Profile". Department of Education, In M.B. Buch
     [Ed] Third Survey of Research in Education.
     1987. p. 454.

Kapadia G.G.
     "A Study of Early Childhood Education Programmes
     for the Underprivileged Children". In M.B. Buch
     [Ed] Third Survey of Research in Education.
     1987. pp.144-145.

Krishnamurthi R.
"Preparation of Materials to develop Reading Readiness in Children of Preschool Age". In M.B. Buch Second Survey of Education. 1979. p.298.

Lina Sr
"Development and Evaluation of Low Cost Indigenous Food Mixes for Pre-Schoolers". In M.B. Buch [Ed] Third Survey of Research in Education. 1987. pp.908-909.

Mathur P.
"Personality Development of Pre-School Children of Working Mothers". In M.B. Buch [Ed] Third Survey of Education. 1987. p.576.

Mehta A.D.
"Sex Role Identification in Pre-School Children From Three Socio-Economic Classes" In M.B. Buch [Ed] Second Survey of Education. 1979. pp. 185 - 186.

Misra B.K.
"Significance of Cultural Background in Learning Process" In M.B. Buch [Ed] A Survey of Research in Education. 1974. p.163.

Muralidharan R.
"Motor Development of Indian Children - Developmental Norms of Indian School Children - 2 1/2 years to 5 years In M.B. Buch [Ed] A Survey of Research in Education. 1974. p.199.

Muralidharan R.
Behaviour Problems of Children - Pre-school and Early School Age. In M.B. Buch [Ed] A Survey of Research in Education. 1974. p.198.

Narain K.
Mental Development of Children from 2 plus to 5 years of age. In M.B. Buch [Ed] Third Survey of Research in Education. 1987. pp.384-385.

NIPCCD

"Country Report on Child Development in India. Implications for Policy and Training,". In M.B. Buch [Ed] Third Survey of Research in Education Survey. 1987. p.928.

NIPCCD

"Working Mothers and Early Childhood Education" In M.B. Buch [Ed] Third Survey of Research in Education. 1987. p.164.

Pandit K.L.

"The Role of Anxiety in Learning and Academic Achievement of Children". In M.B. Buch [Ed] A Survey of Research in Education. 1974. p.337.

Patel S.S.

An Investigation in to the Role of General Abilities of Pre-Primary School Children in Relation to Reading Readiness. In M.B. Buch [Ed] Third Survey of Research in Education. 1987. pp.392-393.

Pathak Y.C.

"A Study of Some Aspects of Physical Growth of Children From Two to Six Years of Age From Urban and Rural Areas of Gujarat". In M.B. Buch [Ed] Second Survey of Research in Education. 1979. pp.227-228.

Pendse S.G.

"Pre-Primary Education in Bombay City and Suburbs". TISS 1949.

Pisharody S.B.

"A Critical History and Interpretation of the Educational Concepts and Methodology of the Montessory System of Education at the Pre-School Stage". In M.B. Buch [Ed] Second Survey of Research in Education. 1979. p.58.

Phukan D.

"The Effect of Parental Bilingualism on the Acquisition of Language Skills of Pre-School Children". In M.B. Buch [Ed] Third Survey of Research in Education. 1987. p.601.

RamaKumar U.
  "Survey of the Pre-Primary Institutions in Bangalore City". In M.B. Buch [Ed] Third Survey of Research in Education. 1987. pp.939-940.

Rao A., Choudhary G.
  "The Balwadi Programme in Pondicherry" In M.B. Buch [Ed] Third Survey of Research in Education. 1987. p. 942.

Rao S.R.
  "A Study of the Effects of Pre-School Education on Primary and Secondary School Education". In M.R. Buch [Ed] Third Survey of Research in Education. 1987. p. 945.

Saran V.
  "A Study of Personality Traits of Nursery School Children Against the Background of their Home Environment". In M.B. Buch [Ed] A Survey of Research in Education. 1974. p.171.

Saraswathi I.S.
  "Production and Mediation Deficiency in Children's Free Recall". In M.B. Buch [Ed] Second Survey of Research in Education. 1979. p.196.

Shahani A.
  "A Study of Intellectual Abilities and Psycho-Social Motor Behaviour among Pre-school Children". In M.B. Buch [Ed] Third Survey of Research in Education. 1987. pp.410-411.

Sharma K.G.
  "A Comparative Study of Adjustment of Over and Under Achievers". In M.B. Buch [Ed] A Survey of Research in Education. 1974. p.344.

Srivastava A.K.
  "An Investigation into the Factors related to Educational Under-achievement". In M.B. Buch [Ed] A Survey of Research in Education. 1974. p. 348.

Somaiah, M.
    "Management of Nursery". In M.B. Buch [Ed]
    "Second Survey of Research in Education". 1979.
    pp. 970 - 971.

Umrajwala V.R.
    "Construction and Standardisation of Reading
    Readiness Test for the Children of Central
    Gujarat". In M.B. Buch [Ed] Second Survey of
    Research in Education. 1979. p. 274.

Vanarase
    "Ability and Scholastic Under-achievement". In
    M.B. Buch [Ed] A Survey of Research in Education.
    1974. p. 348.

Varma M.
    "Significant Correlates of Secondary School
    Failures". In M.B. Buch [Ed] A Survey of
    Research in Education. 1974. p.349

Yeli R.S.
    "A Critical Study of Pre-Primary Education in
    Karnataka". In M.B. Buch [Ed] Third Survey of
    Research in Education. 1987. pp. 988-989.

PAPERS PRESENTED IN CONFERENCES AND SEMINARS

At the 26th National Conference I.A.P.E. January, 1992.

Venugopal, M. : "Of Course My Daughter goes to Nursery
School".

At the OMEP India Regional Seminar in E.C.E. Bombay,
November 22, 1991.

Kaul, V. : Background Paper and Issues on Early Childhood
Education.

Kumar, R. : Admission Tests and Formal Education at Pre-school level - Alternatives.

Muralidharan, R. : Pre-school Programme and Methodology.

At the 24th Annual Conference I.A.P.E., 1988.

Jhaveri, N. : Adults Role in Communicating with Children.

Mistry, V. : Enhancing Language Acquisition and Learning in Young Children.

Sharma, N. : Effects of Problems Related to Communication on Learning and Development of Young Children.

At the 22nd Annual Conference of the I.A.P.E. November, 1986.

Kamat, R. : Development of Pre-school Children and its Implications for Parents and Teachers.

Mallya, I. : Parent Involvement to Enhance Child Growth and Development in Partnership with School.

Mohite, P., Roy, M. : Home Stimulation and Children's Learning.

Mohite, P., Shastri, J. : Teacher's Rating Scale - An Assessment Tool.

Parekh, K., Shukla, S. : Developmental Assessment of Pre-school Children.

Sharma, A., Roy, A., Mistry, V. : Towards Developing An Assessment Checklist for Pre-school Years.

Sharma, N., Sharma, B., Anandalaxmi, S. : Developmental Assessment of Pre-school Children.

APPENDICES

APPENDIX 1

LIST OF SCHOOLS VISITED FOR SURVEY

1. Don Bosco, Matunga,   Bombay - 400 019.

2. J.B. Vachaa, Wadala,   Bombay - 400 019.

3. Dadar Parsi Youth
   Assembly Dadar   Bombay - 400 014.

4. Learners Academy, Bandra   Bombay - 400 050.

5. Jamnabhai Narsee High
   School Vile Parle   Bombay - 400 057.

6. Udayachal Pre-Primary
   School, Vikhroli   Bombay - 400 079.

7. Bombay Scottish,
   Shivaji Park   Bombay - 400 016.

8. Convent of Jesus &
   Mary, Byculla   Bombay - 400 008.

9. Vivekananda High School,
   Chembur   Bombay - 400 071.

10. Greenlawns High School
    Warden Road   Bombay - 400 026.

11. J.B. Petit, Fort,   Bombay - 400 023.

12. St. Anthony's Chembur   Bombay - 400 071.

13. St. Mary's Mazagaon   Bombay - 400 008.

14. Holy Family School, Andheri   Bombay - 400 093.

15. Arya Vidya Mandir, Santacruz   Bombay - 400 054.

APPENDIX II

DRAFT I

ITEMS COMPILED INITIALLY WERE AS FOLLOWS:

I. COGNITIVE SKILLS

1. Picture Recognition

2. General Naming of Articles

3. Visual Memory/Recall

4. Visual content

5. Visual Retention

6. Visual Discrimination

7. Colour Matching

8. Visual Grouping

9. Matching shapes

10. Matching of sizes

11. Visual Rhythm

12. Visual Absurdities

13. Auditory Discrimination

14. Auditory Memory

15. Ability to Discriminate

16. Repeat sentences After Me

17. Selecting Pictures Named by Function

18. Selecting Similar Pictures and Placing Near it

19. Motor Co-ordination - Arrange in Rows

20. Picture Conversation

II. APPARATUS FOR MOTOR SKILLS

1. Manipulative Toys

2. Block Building

3. Pyramids

4. Peg Boards

5. Cylindrical Pegboards

6. Hollow Blocks

7. Tray Puzzles

8. Needle and Beads

9. Shoe Box for shapes & sizes

10. Rectangular Box

11. Post Box

III. Psycho-Social Skills (For Observation)

1. Behaviour of Children:- friendly and cooperative, timid and shy scared cries

2. Emotional Maturity: Willing to leave parents Persuaded by parents Persuaded by parents and teachers Unwilling but later willing

3. Emotional State:

21. General Conversation

22. Repeat After Me

23. Word Imitation

24. Sound Imitation

25. Letter Imitation

26. Sentence Imitation

27. Recalling Numbers

28. Recalling Words

29. Arranging Cards

30. Following Instructions

31. Pointing to the picture

32. Who uses them

IV. Fine and Gross Motor Skills
    (For observation)

1. Eye Control

2. Eye hand Co-ordination

3. Walking

4. Running

5. General Balance of self

6. Concentration

7. Ability to try out/persistence

8. Emotional Stability and Maturity

Happy and secure
Occasionally anxious
Often anxious
Continually anxious
Nervous

4. Ability to establish
   Relationships:

   With Peers
   With Adults
   Independent and Aloof

5. Behaviour at Activities:

   Enthusiastic & Eager
   Actively Involved
   Did when told
   Observed others only.

APPENDIX III

EXPERTS FOR CONTENT VALIDITY

Ms. Parikh, B. — Psychologist.

Ms. Adrienwala, P. — Counsellor.

Ms. Kulkarni, S. — Child Development Expert.

Ms. Kulkarni, M. — Educationist.

Ms. D Sa, L. — Sp. Educationist.

Ms. Kamala, K. — Principal.

Ms. Naville, K. — Supervisor pre-primary.

Ms. Ranade, R. — Teacher Educator (ECCE).

Ms. Nagreth, N. — Teacher Educator (ECCE).

Ms. Govindani, K. — Pre-school teacher.

APPENDIX IV

DRAFT II

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1.   Physical/motor Skills

2.   Cognitive Functioning

3.   Language and speech

4.   Observation of Social/Emotional Features

I.   In Physical/Motor Skills: The specific activities given

to be performed were: a) Blocks b)   Puzzles (simple)

c) Beads   d) Peg Boards.

Following elements were observed:

1.   His eye-hand co-ordination

2.   Motor control

3.   Ability to perform that task (to string the bead, to

fit the peg into the hole of the pegboard).

II.   In Cognitive Functioning, the sub categories were:

(a)   Picture Recognition: To name any four pictures –
Animals/Vehicles/Vegetables/Fruits

(b)   Naming of Articles: To name any two articles –
chair/window/door/book/table/fan/
pencil/glass

(c) Use Of Articles : To name the use of the two articles - what are, 2 Articles named, used for?

(d) Ability to Follow : Instruction was given and the
    Instructions   : child was expected to follow it
                       - 'Give the pencil to me',
                       'Keep the book on the table'.

(e) Matching of colours : Cards prepared in pairs and
    and shapes   : children were asked to match.

III In Language and speech : The sub-categories were

(a) Picture Conversation : On zoo or children's garden or daily routine (any one large picture dipicting these separately was shown to children to converse).

(b) General Conversation : On 'How many brothers and sisters do you have?', 'Where is your papa and mama'?, 'Which T.V. programmes do you like?', etc. were talked about.

(c) Repeat After me : Statements like 'I like to play', 'I want ball' were made and children were asked to repeat it.

(d) Speech Clarity : was scored on 3 point scale - whether it was clear, difficult to understand and baby talk.

(e) Visual Discrimination : Any 2 cutouts (of a Nurse without a hand, a cat without a tail, a chair with three legs) were shown and the child was asked to name what is missing.

IV   Observation of Social/Emotional Features :-

(a) **Behaviour of children** :- Friendly and cooperative,
     Timid and shy, scared/cries.

(b) **Emotional Maturity** : Willing to leave parents,
     persuaded by parents, persuaded by parents and teachers,
     unwilling but later willing.

(c) **Emotional State** : Happy and secure, occasionally
     anxious, often anxious, continually anxious.

(d) **Ability to establish relationships** : with peers, with
     adults, independent and aloof.

(e) **Behaviour at activities** : Enthusiastic and eager,
     actively involved, did when told, observed others only.

APPENDIX V

THE FINAL DRAFT

	:	Scores
1. Physical/Motor skills	:	30
2. Cognitive skills	:	30
3. Psycho/social skills	:	30
4. Comprehension of English Language	:	10
Total	:	100

I Physical/Motor skills :-

The specific activities to be performed were : -

		Scores
a. Beading the string	:	5
b. Peg Boards	:	5
c. Block Building	:	10
d. Puzzles	:	10

Following elements were observed :-

(score each for a & b, 2 each for c & d)

i)   Eye - Hand co-ordination

ii)   Motor control (grasp and grip)

iii) Ability to perform that task
      (to string the bead, to fit the peg into the hole of the
      peg-board)

iv)   Ability to complete that task

v)   Swiftness

11 Cognitive skills :-

The sub categories were :-

a) Picture Recognition :-

   To name four pictures (1 of each) :-

		Scores
a. Animals	:	2
b. Vehicles	:	2
c. Vegetables	:	2
d. Fruits	:	2
Total	:	8

b. Naming of Articles :-

To name any 2 articles (things in the room) :-

	:	Scores
Book	:	2
Table	:	2
Total	:	4

c. Repeat After Me :-

Following statements were made and the child was asked to
repeat them :-

	:	Scores
'I like to play'	:	2
'I want ball'	:	2
Total	:	4

d. Following Instructions :-

Following instructions were given and the child was expected to follow them :-

	:	Scores
'Give the pencil to me'	:	4
'keep the book on the table'	:	4
Total	:	8

e. Speech clarity :-

This was scored on a 3 point scale :-

(Total scores - 6)

if	clear	6 - 5
	difficult to understand	4 - 3
	Baby Talk	2 - 1

III Psycho/social skills :-

This was assessed on the following points :-

a. Social competence :-

	:	Scores
Friendly and co-operative	:	6 - 5
Timid and shy	:	4 - 3
Scared	:	2 - 1

b.   Emotional Maturity :-

	:	Scores
Willing to leave Parents	:	6 - 5
Persuaded by Parents	:	4 - 3
Persuaded by Parents and Teachers	:	2 - 1

c.   Emotional State :-

	:	Scores
Happy and secure	:	6 - 5
Occasionally anxious	:	4 - 3
Often anxious	:	2 - 1

d.   Behaviour at activities :-

	:	Scores
Enthusiastic and Eager	:	6 - 5
Actively involved	:	4 - 3
Did when told	:	2 - 1

e.   Establishing Relationships :-

	:	Scores
Interacted freely	:	6 - 5
Interacted Occasionally	:	4 - 3
Independent and aloof	:	2 - 1

'V Comprehension of English Language :-

	:	Scores
a. The child was asked questions in English and he answered in English	:	10 - 9
b. The child was asked questions in English and he answered in monosyllables	:	8 - 7
c. The child was asked questions in English and he answered in Hindi	:	6 - 5
d. The child was asked questions in Hindi and he answered in Hindi	:	4 - 3
e. The child was asked questions in Hindi and he answered in monosyllables in Hindi	:	2 - 1

APPENDIX VI

INTERVIEW SCHEDULE FOR PARENTS (TO ASSESS HOME ENVIRONMENT)

Aspects covered :-

. Attitude to child rearing.

". Actual Handling.

3. Interpersonal Relations.

1. Parental Expectations.

5. Facilities Provided.

6. Preparation of the child for the interview.

1. Attitude To Child Rearing :-

i) You feel that your child should obey you completely.	Agree/Somewhat Agree	/Do not Agree
ii) You would give more importance to your son's education than your daughters.	Agree/Somewhat Agree	/Do not Agree
iii) A girl's carreer is not as important as the boy's.	Agree/Somewhat Agree	/Do not Agree
iv) Your attending to the child's school work is very important you feel.	Agree/Somewhat Agree	/Do not Agree
) Play is a waste of time.	Agree/Somewhat Agree	/Do not Agree
i) You will accept your child's suggestions.	Agree/Somewhat Agree	/Do not Agree
ii) You would accept any new changes in educating your child.	Agree/Somewhat Agree	/Do not Agree
iii) It is the teacher's job to educate the child.	Agree/Somewhat Agree	/Do not Agree
ix) You will reason out when you want your child to do something.	Agree/Somewhat Agree	/Do not Agree

` ` You will spend more money on toys and books.   Agree/Somewhat /Do not Agree   Agree

2. Actual Handling :-

i) You take final decisions regarding your child.   Yes/Sometimes/Never

ii) You decide the type of play for him/her.   Yes/Sometimes/Never

iii) You compare your child with others.   Yes/Sometimes/Never

iv) When he misbehaves you usually punish him.   Yes/Sometimes/Never

v) When he refuses to obey, you generally get it done by threat.   Yes/Sometimes/Never

vi) You allow your child to question your behaviour.   Yes/Sometimes/Never

vii) He/she chooses the dress to wear when going out.   Yes/Sometimes/Never

viii) You encourage your child to develop ways and behaviour typical to a boy or a girl.   Yes/Sometimes/Never

ix) You encourage him to dress on his own.   Yes/Sometimes/Never

) You have to feed your child at meal times.   Yes/Sometimes/Never

3. Interpersonal Relations :-

) You play with your child.   Yes/Sometimes/Never

ii) Does he/she like to listen to music.   Yes/Sometimes/Never

iii) What does your child like best to play/to watch TV/Any other/Don't know

iv) What are his interests. Yes/Sometimes/Never

v) What are his dislikes. Yes/Sometimes/Never

vi) What games does he play. Yes/Sometimes/Never

vii) Does he prefer to be alone or in a group. Yes/Sometimes/Never

viii) Name 2 of his friends. Yes/Sometimes/Never

ix) Whom does he like Mama/Papa/Both Yes/Sometimes/Never

x) Do you all eat together. Yes/Sometimes/Never

Parental Expectations :-

i) Did you look forward to this child. Agree/Somewhat Agree /Do not Agree

ii) Did you expect an opposite sex child. Agree/Somewhat Agree /Do not Agree

iii) Are you happy with the way he seems to develop and progress. Agree/Somewhat Agree /Do not Agree

iv) You get annoyed when he constantly asks questions on puzzling issues. Agree/Somewhat Agree /Do not Agree

v) You stress on studies a lot. Agree/Somewhat Agree /Do not Agree

vi) You will develop him in co-curricular activities (sports drawing, music, dancing). Agree/Somewhat Agree /Do not Agree

vii) You promise a reward for good behaviour. Agree/Somewhat Agree /Do not Agree

viii) You express joy over his achievements and encourage him to do better. Agree/Somewhat Agree /Do not Agree

ix) You support him even when he fails to achieve something. Agree/Somewhat Agree /Do not Agree

) What do you want him to become specifies/haven't decided/says depends on the child.

5. <u>Facilities Provided</u> :-

(i) Does he have a table to himself   2

Does he have a shelf to himself   2

Does he have a drawer to himself   2

Does he have books to himself   2

Does he have toys to himself   2

                             ————

                             10

(ii) Is there T.V.

How much does he watch - 2 hrs/more   2/0

                             1/0

Which programmes   - Children   2

                 Serials   1

                 All   0

                           ————

                           6

(iii) Did you take your child on holiday outside Bombay

If yes

where,- Native place   1

     - Pilgrimage   2

     - Sight seeing/Hill station   3

                          ————

                           6

iv)   Have you taken your child on outings :-

          Zoo   2

-      Beach   2

          Aquarium   2

-      Museum   2

                           8

v) **Preparation of the child for the Interview :-**

1) Did you prepare him in any special way for the interview?

      Yes/No   2/0

       If Yes -   taught yourself   2

                 sent him to another nursery 2

                                  6

(ii)   Did you teach him alphabets   2

                   numbers   2

                   names of things   2

                   nursery rhymes   2

                  Names of animals 2

                               10

(iii) Did you read aloud ?   2

         sometimes   2

         Regularly   4

                              6

(iv) Have you taught him his full name   Yes/No   ?

                        Address   2

                        Age   2

                        Birthdate year   2
                                            _____
                                               B

APPENDIX VII

RATING SCALE

	Evaluation for the month of	August 1st UT	October 1st SE	January 2nd UT	March 2nd SE
PERSONAL DATA	Physical Development				
	General Health				
	Cleanliness				
	Discipline				
MENTAL ABILITIES	Attention Span				
	Observation				
	Curiosity				
	Memory				
	Receptivity				
	Retention				
	Recall				
SOCIAL SKILLS	Leadership Qualities				
	Mixes Freely				
	Speaks Freely				
	Cooperative				
PERSONALITY TRAITS	Cheerful				
	Moody				
	Restless				
	Confident				
	Self-Reliant				
	Generous				

Appendix VIII

SOUTH INDIAN EDUCATION SOCIETY

K. A. SUBRAMANIAM ROAD, MATUNGA, BOMBAY–400 019.
PHONE : 47 27 66,

FORM OF APPLICATION FOR ADMISSION TO KINDERGARTEN

- ● *Issue of form does not guarantee admission.*
- ● *Recommendations will not be entertained*

K. G. Class : JUNIOR .

Admission Number

1 Name of the Pupil in full
   (in Capital Letters)

2 Father's Name

3 Religion

4 a) Mother tongue .... (b) Sex ...

5 a) Place of birth. .... (b) Date of birth : Date.... 3 Month......... Year .
   (Birth Certificate, in original to be attached)

6 Health
   a) Small Pox Vaccination   Date.. .. .. Certificate No ...
                                         (Please attach)
   b) Polio Vaccination   Date ....
   c) Triple Antigen   Date ....
   d) B.C.G   Date . . ..

7 a) Name and address, in full of the
      Parent/Guardian

   b) Educational Qualifications   i) Father
                                         ii) Mother.. ....

   c) Residential address

   d) Telephone No (if any)

   e) Native place address

   f) Number of Children

   g) If schooling, name of the
      school and standard

8 a) Occupation of the Father / Guardian
      with office address in full and
      Telephone No (if any)

   b) Occupation of the mother with Office
      address in full and Telephone No (if any)

9 Monthly Income of Parent / Guardian

I HEREBY DECLARE THAT THE ABOVEMENTIONED PARTICULARS ARE TRUE AND THAT THE BOY/GIRL HAS SO FAR NOT STUDIED IN ANY SCHOOL

Place : Bombay 400 019.

Date ....   Signature of Parent / Guardian

Admitted in K. G. Class Jr............ ....   Amount paid Rs. ... .(Rt. No   . .)

Date of Admission..... ....   Clerk..........................

Checked by ....

800—12-84 CP.   Hon. Secretary

APPENDIX IX

PROGRESS REPORT

	Evaluation for the month of	August 1st UT	October 1st SE	January 2nd UT	March 2nd SE
LANGUAGE	Recognition				
	Reading				
	Writing				
	Conversation				
	Rhymes				
	Action Song				
	TOTAL				
NUMBER WORK	Counting				
	Recognition				
	Writing				
	Spelling				
	TOTAL				
G.K.	General Knowkedge				
	GRAND TOTAL				
	Grade				
	Rank				
	No. of Working Days				
	No of Days Present				
	Teachers Signature				
	Supervisors Signature				
	Parents Signature				

APPENDIX X

OTHER ACTIVITIES

Evaluation for the month of	Drawing	Painting	Clay Work	Puzzle	Paper folding & sticking	Understands English and speaks fluently	Understands English & speaks fluently	Does not understand English & does not speak fluently
August 1st UT								
October 1st SE								
January 2nd UT								
March 2nd SE								